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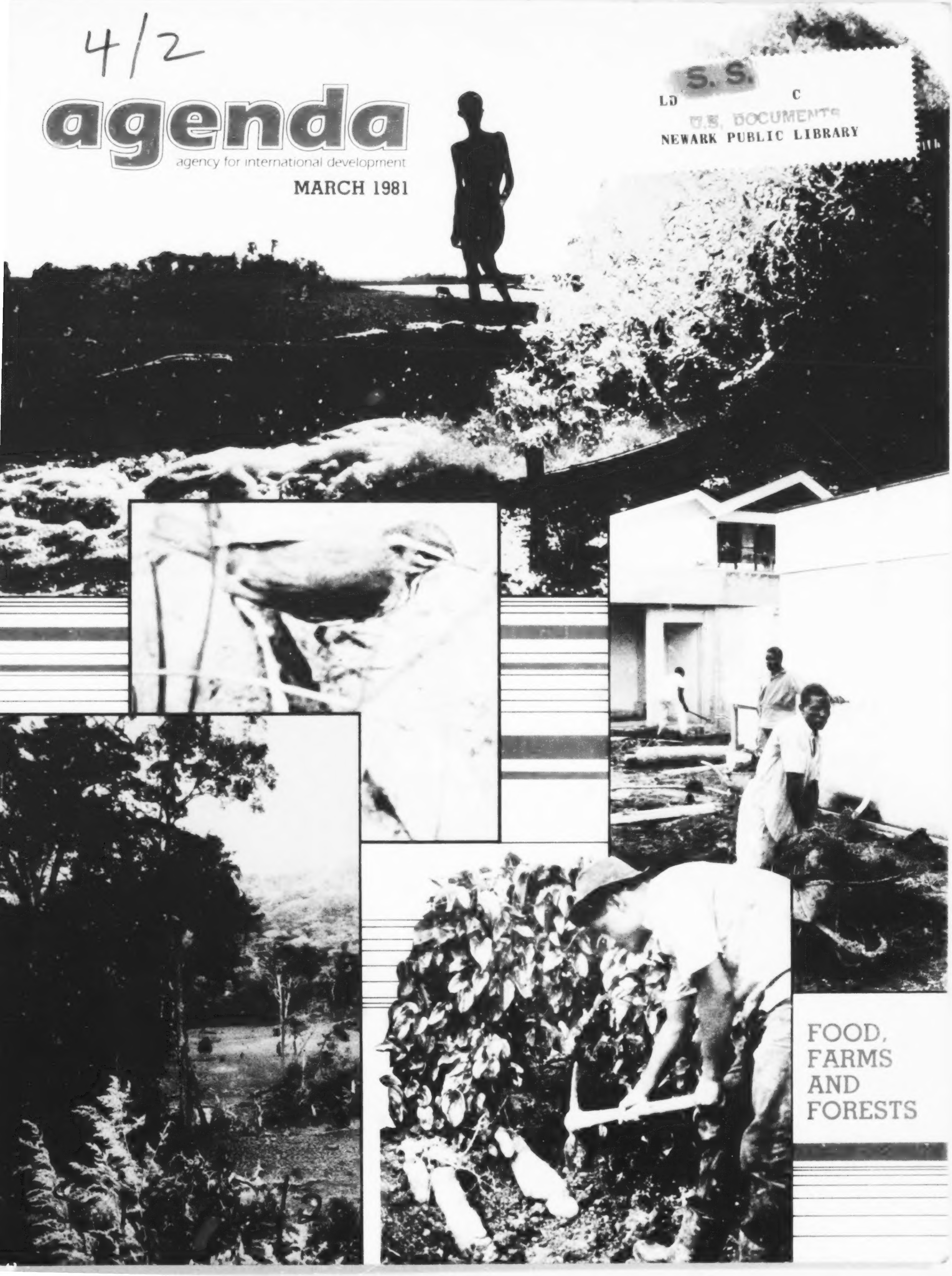

FOOD, FARMS AND FORESTS

DEVELOPMENT UPDATE

Developing countries made striking progress in many ways during the 1970s, reports the Overseas Development Council. Their gross national product grew at an average annual rate of nearly 6%—compared with just over 3% in the developed countries. The manufactured exports of the South grew at an annual rate of more than 10%, and the PLQI (Physical Quality of Life Index, which combines information about infant mortality, life expectancy and literacy) of the developing countries increased from 39 in 1960 to 57 in the late 1970s.

A breakthrough that could result in providing developing nations with millions of tons of protein a year may be in the offing. According to the *Los Angeles Times,* Scottish scientists at Stirling University have developed a technique for producing male-only fish. The work applies to several species of tialpia, a popular fresh-water food fish in tropical Africa and Asia. For the first three or four weeks of life, tilapia are neither male nor female. Later, male or female sex hormones determine the sex of the fish. The young fish grow rapidly, but once breeding starts, growth slows dramatically, making commercial farming difficult. By adding small doses of male sex hormones to water containing the fish, all fry become male. Having no mating partners, the male grow twice as fast as females, don't waste energy and calories on sex and just keep growing.

Generations of Indian women in the foothills of the Himalayas have helped support their families by gathering leaves and roots for medicinal purposes from nearby forests; their sons, by extracting turpentine from the trees. But then the government began selling rights to lumber companies to cut large areas of timber and before the women's eyes their source of income started to disappear. Even more important, they feared their sons would be forced to leave home to search for work elsewhere. When the lumber companies arrived, the women put their arms around the trees and refused to budge. The Indian government considered the women's plight and now formally supports them; cutting by the lumber companies has stopped.

New agricultural technology has only reached 10 to 15% of the world's 3 billion farmers, says agronomist and Nobel prize winner Norman Borlaug.

Consumer's guide: The U.N.'s *Development Forum* reports that the Consumer Guidance Society of India recently sampled foods commonly sold by roadside vendors in Bombay. The foods were tested for the most common food-related diseases, such as cholera, gastro-enteritis, dysentery and food poisoning. Of the eight samples, seven proved unfit for human consumption, with bacterial levels far exceeding the limits prescribed by health authorities.

The non-oil-producing developing countries now absorb 38% of United States exports and are the fastest growing export market for American goods, according to an Overseas Development Council report.

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Cover: Home vegetable gardening is providing balanced meals to nutrition-starved families in Jamaica. In Africa, the "noble yam" persists as a favorite food, while in Asia, children are learning to plant trees. Deforestation in South America's tropical zones is spelling death for North America's songbirds—and trouble for U.S. farmers.

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A NEW FOOD SUPPLY AT THE DOORSTEP

Jamaican women are learning backyard gardening, soil conservation and nutrition, at the same time.

by Lee Mullane

There is something new going on in rural Jamaica today. Young women—who know the land, families' needs and the economics of farming—are becoming a new breed of agricultural agent. Trained in composting, crop rotation and the principles of nutrition, they are traveling from farm to farm, talking to other women, listening and teaching. They are persuading small farmers, many of them women, that there are ways—old and new—to get more from their land.

Jamaica is a willing land. Until erosion in recent years robbed it of much of its topsoil, its rich tropical earth produced fruits and vegetables almost without being asked. Breadfruit and avocado-pears grew wild and abundantly. Farmers had little difficulty.

But there is a problem now, and it's getting worse. Jamaica, like many other developing nations, is reeling under the combined blows of population growth, deforestation, country-to-city migration and economic chaos. In an attempt to fight back and save the vital watersheds, stop the erosion and boost food production, the Jamaican government has encouraged small farmers to plant cash crops to send to the hungry in the cities and to sell on the foreign market. The trouble with this measure is that it allows the farmers very little for themselves or their families. Cash crops—coffee, bananas, cocoa, yams—don't provide a balanced meal. The farmers are too poor to buy what they need to supplement the crops they grow to sell. Over time, the farm children show signs of malnutrition.

Twenty percent of the children under 4 are significantly under-

Young women spend a month in training in gardening and nutrition. This is followed by refresher courses and additional training.

weight. The death rate for 1- to 4-year-olds is twice that of Barbados, Trinidad and Tobago. Just under half of all pregnant women are anemic.

The fledgling crop of new extension agents—they number about 23 now—are under the Family Food Production Plan, itself a recently added part of a wider effort of the Jamaican government, with help from AID. That effort, called the Integrated Rural Development Program, begun in 1978, is aimed first at halting soil erosion and second at increasing food production and helping farmers take care of their own.

With headquarters in Christiana, the Integrated Rural Development Program has sought over the past several months, primarily through soil conservation but also through extension services and credit, to:

- Improve the standard of living for farm families.
- Increase the amount of food for those not living on farms.

Since the first extension agents went to work last April, more than 540 home gardens have been planted.

Jamaica, like many developing nations, is reeling under the combined blows of over-population, deforestation, country-to-city migration and economic chaos.

- Improve Jamaica's trade balance by cutting down on food imports. Jamaica now imports over half of the food it needs.
- Provide an important source of foreign exchange through exports.
- Create a rural market for industrial goods and services.

Jamaica's economic problems are well known. Increasing poverty has taken a heavy toll on the people and the land.

The small farmers hold the key to food self-sufficiency for Jamaica. The extension agent project is geared to women farmers because men are migrating in increasing numbers to cities and other countries in search of jobs.

In common with women throughout the developing world, the Jamaican farm woman is finding her resources dwindling while responsibilities mount. She is expected to feed and care for her family, see to education when it is possible, and grow crops to sell and eat too, when there is enough. If her man is working abroad, she waits for what little money he can send home.

With an eye toward improving the conditions so many rural Jamaican women face and toward including them in the overall rural program, AID and the Jamaican government initiated the Family Food Production Program last year as a model "project-within-a-project." It is centered in the Two Rivers and Pindar Watershed areas in the northeastern region of the island nation. According to the program's designers, Elsa Chaney and Martha Lewis, both on contract to AID's Office of Women in Development, it is a nutrition-food production package based on carefully planning a cycle of continuously growing, nutritious vegetables. These vegetables are chosen for their ability to complement the traditional starchy diet.

It means that women are being encouraged by their own countrywomen to plant a series of vegetables that will almost completely balance their diet (some meat is needed). The objective is to keep the household garden producing something all the time. The agents are suggesting that the gardens be made right outside the door, though many Jamaican women have to walk a distance. But with a garden nearby, a woman can tend her crops while doing other chores, considerably cutting the time involved and insuring careful cultivation. For example, watering becomes a natural extension of household duties when a woman can toss dirty water used in the house literally from the door step onto the garden. That's much easier than trekking perhaps miles carrying a water jug.

"To pin it down," explains Chaney, "The Family Food Production Plan is a cycle of nine nutritious vegetables, which, if planted in roughly the order laid out and combined properly with the starchy foods, will give a family pretty good nutrition with only occasional animal protein."

The plan was worked out by Lewis, a gardening expert who collaborated closely with the project horticulturalist. For example, if you put rice with peas (kidney beans), you get a release of the amino acids and the dish is more nutritious than to eat each alone. So it is with a number of food combinations.

The various recommended vegetables come from six groups: Amaranthus (calaloo); Cucurbite (pumpkin, squash, cucumber, and melon); Hibiscus (okra and sorrell); Kole (kale, pak choi, cabbage, turnips, broccoli, cauliflower, mustard); Legume (red pea, cow pea, peanut, mungo beans, gungo pea, broad beans, soybeans, string beans); and Solanaceous (tomato, pepper, garden egg, and Irish potato).

As the first step in setting up the program, the planners looked carefully at the women's normal work load. Would they be able to take on what for many might be an added burden? About half go regularly "to the bush" to work on the cash crops.

They ascertained that most could. For those who did work on cash crops, the help of older sons and menfolk would be needed. In any case, the men must be involved because unless they agree to use a piece of land for a household garden, there is no garden, Chaney explains.

The next step was to recruit and train young women, almost all from the project area. With a combination of U.S. and Jamaican experts, a month's training course gave the women the rudiments of gardening and nutrition. The initial course is followed up with refreshers and additional training. More than half of the original class is now at work and their numbers are growing as new classes start.

The first extension workers have been in the field since April, and their teaching appears to be taking hold. More than 540 gardens have been planted in the first six months, according to Chaney. Now there are more clients than the program can handle, she adds. "The women are saying, 'When are the young ladies coming to help me start my garden?'"

In classrooms like this, students are taught that home vegetable gardening is integral to the health and economic well-being of the Jamaican family.

All the vegetables selected and recommended for planting except kale are familiar to the woman farmers, a factor contributing to their acceptance.

Farmers are encouraged to plant cash crops, but these alone do not provide a balanced meal.

Lewis explains:

"We knew, for example, that calaloo is common in Jamaica and it's very nutritious. We also knew that kale is very much like calaloo, with the added benefit of being more productive and very high in vitamin A and iron, both of which are needed in the tropics."

What happens when a garden has a variety of vegetables growing in it all the time, Lewis explains, is that the woman feels obligated to "add a little to the pot" each day, and that is very good for the diet.

If one plant is beginning to mature and reach the end of its productive cycle, you have another type ready and waiting to put in the ground. The system depends on planning. Therefore, Lewis continues, care of the soil is essential. "You can actually create soil by composting," she adds. "I dream this will be a new wedge to introduce new care and appreciation of soil."

If gardening is to be the wedge, the young woman extension agents are the force to drive it home. They are helping to prepare gardens, to build up the soil and to select the vegetables, and they are teaching good nutrition—meal planning, sanitation, what foods are best for pregnant women, infants and toddlers.

Both Chaney and Lewis believe the program can work in other places as well, even in climates vastly different from Jamaica's. Home vegetable gardening is proving to be integral to the health and economic well-being of the family in Jamaica, Chaney says. She adds: "It also may well be a key to recognition of the economic contribution that women are making to development everywhere." □

Lee Mullane is editor of "Agenda."

KIDS+ SCHOOLYARDS+

School tree-growing projects can teach reforestation.

by Michael D. Benge

Many people in developing countries know how to grow at least some food. Few know how to grow trees. Yet trees maintain the soil that grows food and provide the wood for cooking.

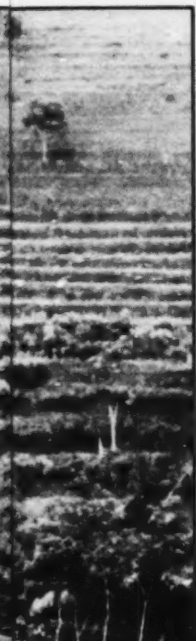
Trees are disappearing. Mother Nature can no longer carry the burden of replacing what is lost. If man is going to cut, man will have to replant.

But there is a scarcity of tree seedlings for planting, and this is a problem that overshadows even the lack of forestry know-how. Moreover, the high cost of setting up and maintaining tree nurseries and the lack of the means to transport seedlings are added deterrents to reforestation. The result is that nursery seedlings have become too expensive and trees are not being planted.

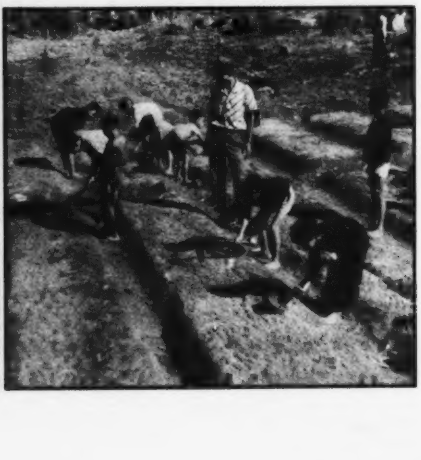
There is an alternative.

If developing countries do without the central nurseries that have be-

ZEAL = TREES



If man continues to cut down trees, trees will disappear and with them soil for growing food. The solution may lie in tree nurseries run by schools.



come their primary source of seedlings and if they create school and backyard nurseries, they can lower overhead costs, involve villagers directly, use resources better, and train students and villagers to care for the trees with familiar tools and technology. Wells can be dug at school or in the village.

School and backyard nurseries can teach people that trees are fundamental to maintaining the water supply, reducing soil erosion, improving soil fertility, and providing a habitat for wildlife and forage for farm animals.

Schools can serve as focal points through which to introduce new technology, conduct demonstrations and carry out extension work. The villagers respect the school teachers. Often students will take home tree seedlings to plant around the house or in the kitchen garden. Frequently, they can influence their parents to plant trees. In this way, each student is a potential extension agent.

Plots of land could be set aside for school and community wood lots, energy plantations, fruit orchards, parks, or forage production areas. Planting and maintaining these areas could become part of the school curriculum and school and community projects. Where community efforts are not feasible, there is an alternative. Backyard nurseries may become private enterprises.

It has worked in at least two

developing countries—the Philippines and Haiti.

A school program to produce tree seeds was undertaken by a district school supervisor in Cebu in the Philippines. The supervisor required that every teacher in his district plant and care for five *Leucaena* trees in the school yards before they could collect their salary. The trees were inspected each month to see if they were still growing. If a tree died, a new one had to be planted—"No trees, no pay!" This seed program served as the basis for an expanded school tree planting project.

The district supervisor persuaded the Philippine government to set aside a parcel of land at each school for mini-energy plantations and parks. The school official met with the local villagers and got them to agree that these areas would be protected—livestock grazing and poaching would be prohibited.

The villagers helped the children build a fence around the areas whenever seedlings were available. An agriculturalist came to the school to teach pupils to care for *Leucaena* trees. Each student was required to plant and care for 10 trees and was graded on his or her efforts. Classes and schools competed. Part of the competition was to determine which student, class and school could plant the most trees—as well as influence the most parents, family and community members to plant trees.

In Haiti's Grande Rivier du Nord region, backyard nurseries are doing well. Farmers have learned that soil can be made more fertile, erosion reduced and crop yields increased—all desperate needs—by planting the right kind of trees on land not already planted with crops. In fact, in Haiti, growing trees on idle land is like putting money in the bank.

PLANT A TREE TODAY FOR YOUR TOMORROW
YOUR HERITAGE

Through the efforts of the Mennonite Central Committee, a private voluntary group, farmers have been given seeds and taught how to set up tree seedling nurseries. They have been encouraged to plant fast-growing species.

Initially the committee's staff of agricultural technicians and extension agents singled out recognized leaders among the farmers and encouraged them to plant trees. The farmers in turn became extension agents. It is estimated that over 2 million trees have been planted.

School nurseries, mini-parks, fuel plantations and fruit orchards are practical laboratories and excellent mediums through which many subjects, such as science, biology and ecology, can be taught. With the right selection of fast-growing trees (preferably leguminous), one site may serve all these functions.

Schools also are an excellent medium through which to multiply seeds for sale and use in expanded forestation projects. Seeds of rapidly growing trees can be given to the students for propagation, and the seedlings planted and nurtured as a requirement in their regular school curriculum. Rapidly growing tree species, such as *Leucaena leucocephala*, can produce as many as 10,000 viable seeds per tree only after one year. Schools could thus produce vast quantities of seeds.

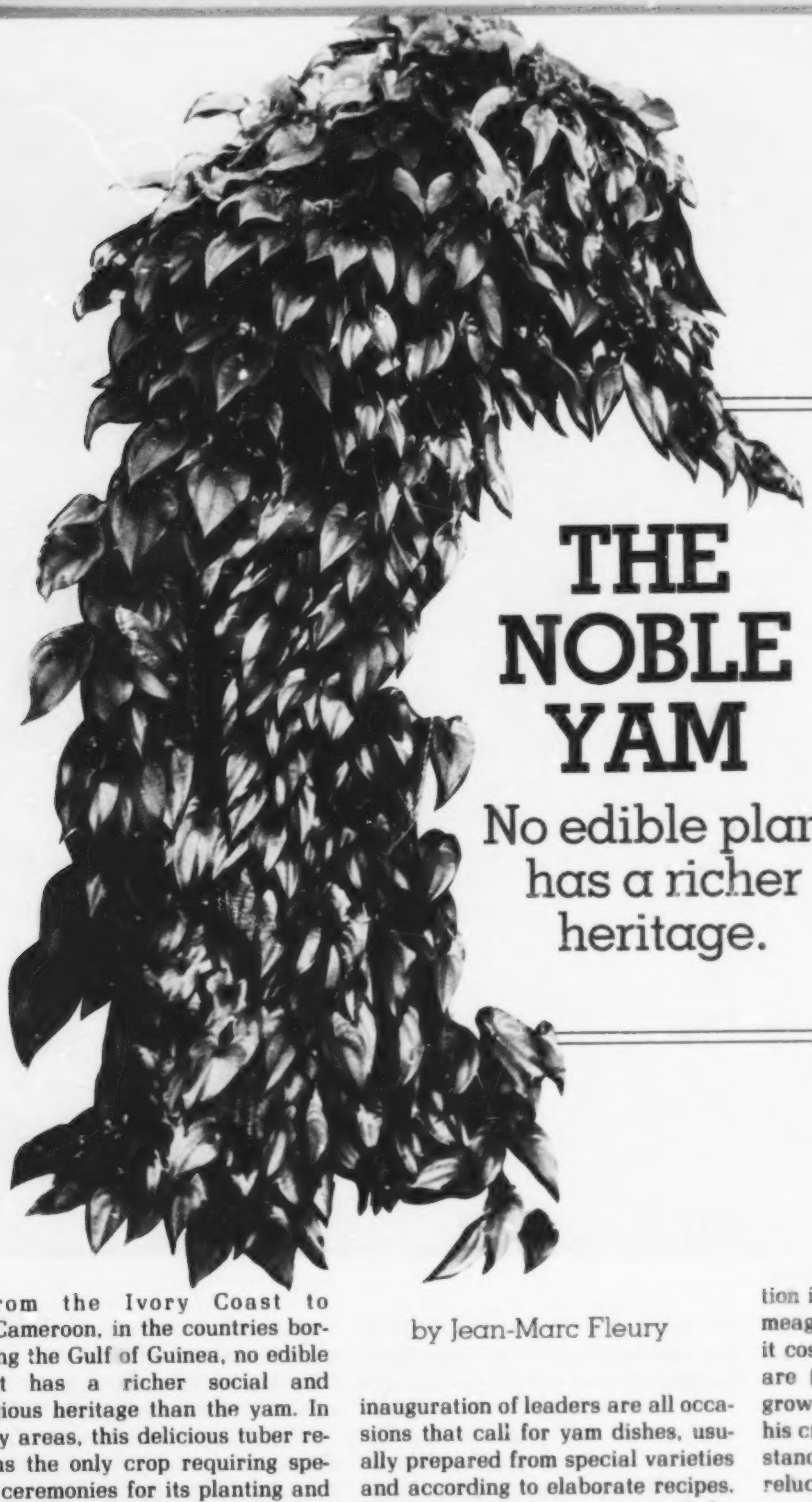
Students and villagers could even contract to gather seed from forest trees, with careful education and supervision built in.

Why not organize a youth conservation corps, much like the U.S. Boy Scouts and Girl Scouts? In many developing countries, Boy and Girl Scout organizations already exist. They could expand into a conservation corps and teach tree-growing.

Often, hillside and subsistence farmers cultivate only a portion of their land; the rest lies idle. Unless this land has adequate vegetation, erosion accelerates, soil structure deteriorates due to solar radiation, and essential nutrients are lost through the leaching effect of tropical rainfall. It is necessary to educate the farmers to these facts and to convince them that the potential production of their land is declining.

But education is not enough. The farmer must have a ready source of appropriate tree species available to plant on his unused land. These plant materials can be provided through a backyard nursery program. ☐

Michael D. Benge is an agroforester with AID's Office of Agriculture.



THE NOBLE YAM

No edible plant has a richer heritage.

by Jean-Marc Fleury

From the Ivory Coast to Cameroon, in the countries bordering the Gulf of Guinea, no edible plant has a richer social and religious heritage than the yam. In many areas, this delicious tuber remains the only crop requiring special ceremonies for its planting and harvest. It is so closely interwoven into the life of the people of West African forest zone that a French botanist christened this region "yam civilization."

Births, weddings, deaths, and the inauguration of leaders are all occasions that call for yam dishes, usually prepared from special varieties and according to elaborate recipes. The demand for yams—one of the oldest foodstuffs in existence—remains constant.

Yet, venerable as it may be, the yam has been criticized by a number of African governments. Its production is extremely costly, the returns meager. In Cameroon, for example, it costs over $1,150 to plant a hectare (2½ acres) of yams, and the grower often has to keep a third of his crop for seed! It is easy to understand the agricultural ministries' reluctance to support such a costly crop, particularly as it requires five or six times as much work as cassava or sweet potatoes. It appeared that the yam was doomed to disappear, giving way to other more practical tubers.

But the officials and the planners underestimated the attachment of millions of people for whom yams are the most prestigious of foods. Yam production remained constant. Authorities were forced to acknowledge the error of their ways and include the tuber in their national agricultural programs.

Although it produces only about a million tons each year, compared to neighboring Nigeria's 12 million tons, Cameroon included the yam in its root crop improvement plan. Simon Ngale Lyonga, an agronomist at the Agronomic Research Institute's Ekona station, at the foot of Mount Cameroun, took charge of the Cameroonian yam program.

"From 1959 to 1976, I was up to my ears in yam," he says. "In fact, the government had little choice: one area of Cameroon bordering on eastern Nigeria alone imported 4,250 tons of yams in 1965; imports for the country as a whole totaled at least four times that amount."

Under the national root and tuber crop improvement program, Cameroonian authorities plan to increase yam production from the 400,000 tons harvested in 1975-76 to 1.3 million tons in 1980-1981—an annual increase of nearly 20%. Lyonga, coordinator of the program, says that it is still too early to tell whether this objective is being met.

However, the obstacles to profitable cultivation are such that Cameroonians now speak of the need to "redesign" the yam. The top part of the plant is a vine that must be supported by a stake to obtain an acceptable yield. But the demand for firewood has drastically reduced the wood available and yams require some 2,500 stakes per hectare (1,000 stakes an acre)! Moreover, as the tubers of some varieties grow about three feet below ground, harvesting involves major excavations and precludes mechanization short of bulldozers. Finally, enormous quantities of seed are required: growers must plant about 10,000 tuber pieces or up to five tons of seed per hectare! All that for a yield of 15 to 50 tons. It is going to take time to "redesign" the yam.

With the yam growers in mind, Lyonga and his team wanted to tackle the most pressing needs first and come up with strategies that could be applied immediately. First they had to find the highest-yielding varieties. With assistance from Canada's International Development Research Center (IDRC), 95 indigenous varieties were collected throughout Cameroon and tested along with 19 other varieties received from the International Institute of Tropical Agriculture (IITA) in Ibadan, Nigeria. Analyses confirmed the relatively high protein content of the yam tuber, particularly of the species *Dioscorea dumetorum*, which contains up to 11% protein. In addition, *D. dumetorum* yields acceptable crops even without staking, and the tubers do not burrow quite as deeply into the ground. It would

Left: In Cameroon, a farmer must keep a third of his crop for seed. Below: The obstacles to cultivation are causing some to speak of "redesigning" the yam.

be almost the ideal yam if it did not have a tendency to harden quickly and become woody after harvesting: it has to be eaten the same day, preventing commercial use. A chemist is trying to determine precisely why *D. dumetorum*'s carbohydrates turn into indigestible cellulose so rapidly.

While awaiting the development of ideal varieties, Lyonga, after succeeding in making the yam the subject of modern agricultural research in Cameroon, is now working to set up an improved seed distribution network and to produce data sheets on cultivation practices.

Thousands of cross-breeding attempts will have to be made before varieties emerge that lend themselves to mass production. Having switched from sexual to vegetative reproduction centuries ago, the yam does not bloom. Fortunately, they are now able to induce flowering systematically at such places as IITA, where many promising hybrids have been produced.

Yet, even if an acceptable yam is developed for mass production, small farmers will continue to plant the traditional varieties required by customs. Those customs have ensured this demanding crop a prominent place through the ages. ☐

Jean-Marc Fleury is on the staff of the International Development Research Centre of Canada.

Silent Spring Revisited

by Eugene S. Morton

Tropical deforestation is killing U.S. migratory birds.

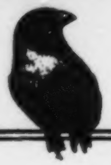
Roughly two-thirds of the breeding birds in many North American forests migrate to the tropics for six to nine months of the year. Only recently have biologists progressed in outlining the tropical needs of these millions of insect-eating birds. The disappearance of tropical forests may have as its first important and direct effect the destruction of much of the North's breeding birds.

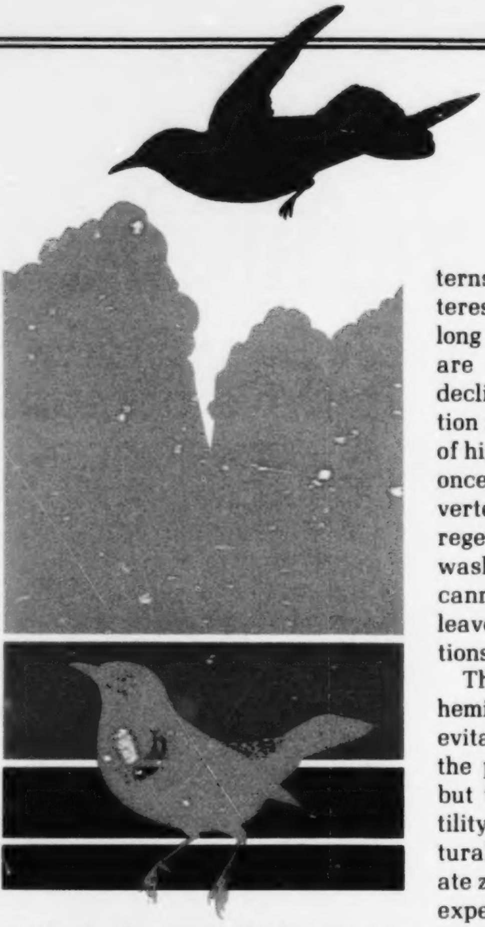
In a symposium just published by the Smithsonian Institution Press (Migrant Birds in the Neotropics: Ecology, Behavior, Distribution, and Conservation; Allen Keast and E. S. Morton, eds.), more than 40 scientists report on their ecological studies of these birds in the tropics. Their information shows that birds breeding in North America are not interlopers, "fitting in" as best they can around the fringes of tropical forests already filled with resident birds: they are an equally important part of these forest ecosystems.

Rather than "invading" the tropics like foreigners and then returning "home" to the North to breed, the migrants should be viewed as leaving their tropical "homes" for a brief breeding sojourn to the temperate North, where they take advantage of spring's flush of insects to raise larger broods than they could if they remained in the tropics. While doing so, they are voracious predators that reduce the number of insect pests and hold down the number of insect generations per year. Without these birds, for example, there would be little to stop "spring webworms" from having many generations per season instead of one in early spring, before most migrant birds arrive.

Many migrants not only find their food in the leafy canopy of tropical forests, they return each year to the same trees. John Rappole of the University of Georgia recently recaptured a Kentucky warbler banded seven years earlier on the same spot in a Vera Cruz, Mexico, forest. Rappole found that most of the forest he surveyed for migrants in 1973 and 1974 was gone in 1980; he found one-twelfth the number of migrants on the same plot after forests had been partially cleared. There is therefore no longer any doubt that many migrant species disappear as tropical forests are cleared. And for the many species that return each year to winter territories, there is no place to go, since all remaining forests have traditional owner-birds ready to defend their turf against these refugees.

The decline of migrant birds has been slow until now. This is because birds from one area of the breeding range scatter widely throughout the tropical range. For many species, this winter diffusion means a slow but perceptible decrease as tropical





forests disappear. For others, a sudden decline may occur when feeding sites along the migration pathway become insufficient or when the diversity of plant species is no longer sufficient to provide the critical fruit or nectar food for even a few days.

With 20,000 to 40,000 square miles of forest destroyed each year, the decline of migrant birds will accelerate. The problem is exacerbated by the smaller wintering area than breeding area for migrants.

Birds from approximately 6.5 million square miles in North America funnel into a wintering area of about 1.6 million square miles, concentrating in winter about fourfold.

This is only a rough generalization that does not reflect the true complex adaptations that migrants have evolved over thousands of years. While some species may go directly from breeding territories to winter territories, others traverse nearly the whole breadth of Western Hemisphere according to a specific calendar.

For the Eastern kingbird, the hemispheric pattern of wet and dry seasons is important. In early September, kingbirds leave North America in a rapid passage direct to the southern end of their migration in Amazonian Peru, Colombia, and Bolivia, arriving in late October. At the same time, they change from their northern insect diet to one almost exclusively of fruit plucked from forest trees. Migration north begins as the dry season presses north from the equator. By March they enter Panama, feeding almost exclusively on fruit from one species of tree that may time its fruit ripening specifically to the passage of the kingbird. The kingbird has evolved to track the tropical dry season because then it will find more abundant fruit. But it is clear that an immense tropical area is used for winter survival by this still common North American breeder. The destruction of forests in a segment of the nearly continuous migratory pathway will permit survival of only those birds with sufficient fat reserves to find the next patch of dwindling forest. Fewer birds will have that luck as patches become further separated.

The loss of migrant birds will be severely felt in North America, where they constitute such a large percentage of the breeding birds. But incentives from the United States to other Western Hemisphere countries to preserve tropical forests cannot be viewed as self-centered by the rest of the world. The loss of migrant birds reflects land use patterns that will not be to the best interests of tropical countries in the long run. Migrant bird populations are a biological indicator; their decline reflects incipient desertification of once-lush lands. Hilly regions of high rainfall are best to forest, for once forests are removed and converted to grassland, they do not regenerate, the nutrients inevitably wash away, and bare earth which cannot support man's existence leaves no legacy for future generations.

The loss of migrant birds, a truly hemispheric resource, is not an inevitable result of change reflecting the progress of developing nations, but the decrease in their soil's fertility, the misapplication of agricultural techniques suited for temperate zone climates, quick riches at the expense of sustainable yields, and population growth that thwarts the meaning of "developing."

There is no justification for losing migrant birds to the extent probable at this time, for they represent only one, albeit an important, reason for tropical forest protection. Loss of the genetic material represented by the incredible number of plant and animal species that make up a tropical forest will remove potentially invaluable genes from our developing genetic manipulation technology, not to mention important chemicals and drugs. Forest destruction, permanent removal of whole ecosystems, amounts to massive experiments that will remove a legacy. The decline of migrant birds will indicate how widespread the effects will be.

Eugene S. Morton is a research zoologist at the National Zoological Park, Washington, DC.

IN PRINT

A Review by A. Gordon MacArthur

CRISIS IN THE SAHEL:

A Case Study in Development Cooperation

CRISIS IN THE SAHEL: A Case Study in Development Cooperation, by Noel V. Lateef, Westview Press, Boulder, CO, Frederick A. Praeger, publisher, August 1980. 288 pages. $25.

World attention was focused on the Sahel in the early 1970s: International news photos depicted suffering people and starving cattle in a parched land. The drought that struck the Sahel, the group of eight West African states stretching across the southern fringe of the Sahara Desert, lasted from 1968 to 1974. It was not the first time that drought devastated this area, nor is it likely to be the last. But this time it captured universal awareness as never before. The Sahel region, containing 30 million people in an area about two-thirds the size of the United States, is situated in a precarious ecological zone of fragile soils and erratic rainfall.

Noel Lateef's book, *Crisis in the Sahel*, presents a realistic assessment of the Sahel's problems and potential. The book is painstakingly researched and combines a wealth of information on economic and social indicators—to the extent that these can be collected in an area almost devoid of basic statistics. The author makes it clear that although the Sahel is a harsh place to live, its problems are largely social—lack of basic education, health conditions among the worst in the world, lack of even the most basic transportation, lack of basic technology, lack of an effective civil service.

While food production has not been able to keep pace with consumption, a situation clearly aggravated by the drought, Lateef rightly points out that the Sahel has the potential to feed itself, if basic structural problems can be overcome: Farmers must be given incentives to grow more millet and sorghum. It is not enough to address only the technical aspects of growing crops. If the farmer cannot get his produce to market for lack of roads and if the government sets support prices for grain at levels that offer no inducement to farmers to grow more, total food production suffers.

Lateef rightly argues that the low level of technology and education, the inadequate infrastructure and the weakness of the institutional base are the major factors inhibiting economic growth, not the lack of physical resources. Grain production in many parts of the Sahel could increase dramatically through better use of technology. For example, in Niger, AID-supported cereal production project has demonstrated that a threefold increase in yields, over what was possible using traditional methods, can be obtained under rainfed agriculture. The irrigation potential of the Sahel, with its three large river basins, the Senegal, Niger and Gambia, has scarcely been tapped.

Beyond dependency on agriculture and livestock for its basic susbistence, the Sahel has the potential of realizing enormous benefits from mineral exploitation. Niger offers the example of a poor country endowed with large reserves of uranium, an asset that is currently being exploited and for which revenues realized by the government are placed in a development fund.

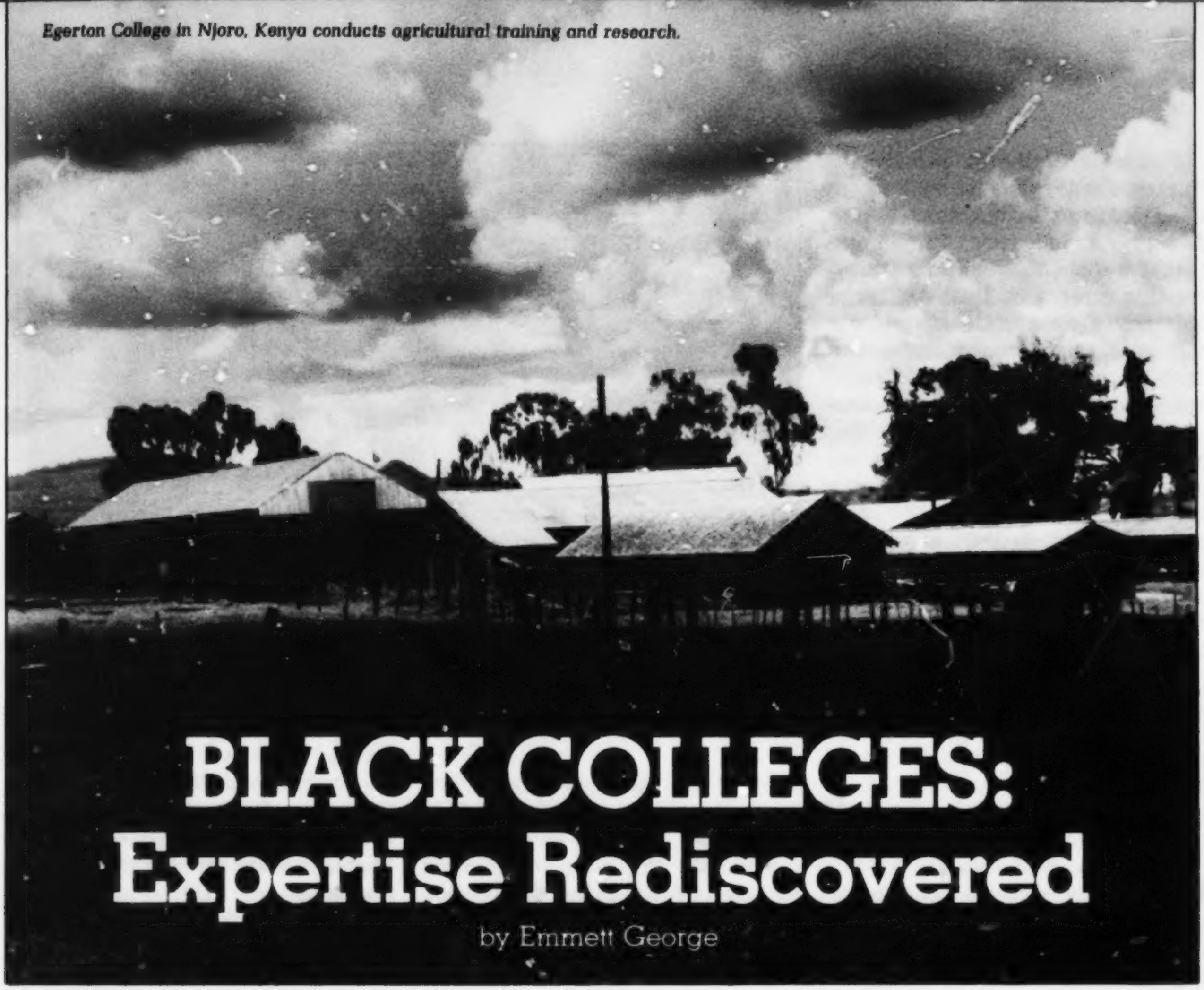
While Lateef engages in a good deal of theorizing about development in general and provides insights into various models of development, his description of the Club du Sahel, the informal gathering of donor and recipient states that provides the framework for the long-term economic development planning in the Sahel, is most germane.

More a process than a formal organization, the Club du Sahel came into being during the final years of the last drought. It brought together the Sahelian states and the bilateral donors interested in long term development of the region. The Sahelian states had themselves formed the Interstate Committee for Drought Control in the Sahel (CILSS) in 1973, and the Club became the rallying point for donors who saw the Sahel's ecological and economic problems is regional and were determined to avoid a piecemeal, ad hoc approach to them.

The Club du Sahel and the CILSS have established a model for development. That model demands a long-term commitment and patience. Lateef ably describes the problems and potential of the area and gives a detailed, thoughtful insight into the efforts now going on to lessen the impact of any future droughts on the people of the Sahel. ☐

A. Gordon MacArthur is assistant director for program in AID's Office of Sahel and West Africa Affairs.

Egerton College in Njoro, Kenya conducts agricultural training and research.



BLACK COLLEGES: Expertise Rediscovered

by Emmett George

At the turn of the century, black educator Booker T. Washington, founder of Alabama's Tuskegee Institute, sent a team of agricultural specialists to Togo, then a German colony in West Africa, at the request of the German government; they were to teach cotton cultivation. This was probably the first time a predominantly black U.S. college had assisted a foreign country. Other black institutions followed Tuskegee. They have made a significant, yet largely unrecognized, contribution to development.

A heritage of hardship has fostered an important understanding of development problems.

In the 1940s, a professor at North Carolina A&T University in Greensboro helped lay the foundation of President Truman's Point Four program, forerunner of today's U.S. foreign assistance program. William Edward Reed, director of international programs and dean of agriculture at A&T, traveled for the State Department to Liberia, Sierra Leone, Indonesia and other countries to help plan development programs.

And in the '50s, Prairie View A&M University, near Houston, and Southern University, in Baton Rouge, LA, joined the ranks of colleges and universities assisting poor nations.

For years these and other predominantly black schools have worked to shed the label of "teacher-preacher factories," which resulted from the large number of graduates trained in the two fields. Traditional segregationist policies restricted professional involvement of black Americans primarily to those two areas.

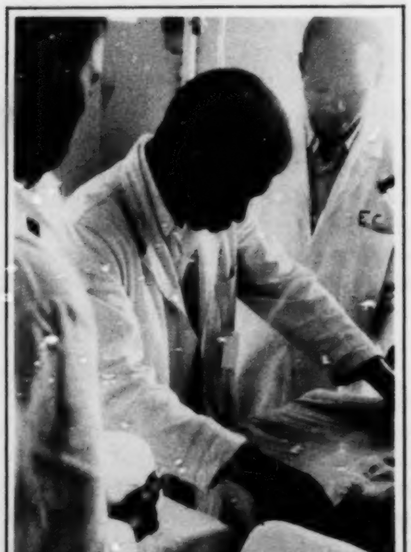
Nevertheless, since they were founded in the late 1800s, Tuskegee and other schools have been teaching agriculture and rural development despite the fact that few professional jobs were available in those areas. In recent decades, these black colleges have also trained hundreds of foreign agricultural specialists.

Finley T. McQueen, director of Tuskegee's Washington office, recalls that in 1954 Tuskegee sent professors to Indonesia to set up machine shops and build vocational training centers. In 1960, McQueen led another team to Liberia under a U.S. government-funded contract to train teachers as part of a rural school development program. McQueen spent seven years with the project, which was subsequently expanded to build teacher training facilities at Zorzor in 1961 and Kakata in 1964. By 1964, enrollment at these institutions had climbed to 375. Most of these projects were funded by the International Cooperation Administration, a predecessor of the Agency for International Development.

SECID professors representing several predominantly black schools meet with village leaders as part of an AID-supported agricultural research program in Upper Volta.

Today, Tuskegee experts are advising farmers in North Yemen on growing high-yield varieties of fruit and nut trees to supplement diets that now consist largely of lamb and sorghum. The project is designed to reduce North Yemen's dependence on imported fruits and nuts. Currently the country produces food valued at about $9.7 million a year, about 11% of the value of its food import bill. Its import bill for produce exceeds $30 million a year.

Egerton students produce a cheese well-known throughout most of East Africa.



Southern University, anticipating increasing involvement in overseas projects, recently opened its Center for International Development. "The Center will become one of the most viable mechanisms for providing developmental assistance to Third World countries," predicts Granville Sawyer, assistant to Southern's president. Sawyer said that Southern and other black schools will one day be regarded as highly as larger universities such as Michigan State University or the University of California at Los Angeles in terms of overseas project work.

The participation of American colleges in overseas development goes back to the 19th century, but it was not until the Point Four program that many schools became involved. Under Point Four, the United States concentrated its assistance in India, Taiwan, South Korea and Latin America. American schools from the Midwest, South and Far West, with climates similar to many developing nations, were encouraged to help design and carry out overseas projects. Colorado State, Kansas State, the University of California at Davis, California Polytechnical Institute, the University of Missouri and Michigan State have been leaders in this area.

AID'S Board for International Food and Agriculture Development (BIFAD) is working to remove a number of obstacles to greater participation by other American colleges, particularly black colleges. These obstacles include promotion and tenure policies that do not reward overseas research and development work; gloomy budget forecasts; and a shortage of language skills.

Southern is working with Louisiana State University in Sierra Leone on a crop research and marketing project. In conjunction with Njala University, the project is intended to help small scale farmers throughout Sierra Leone produce more rice.

Many developing countries like Sierra Leone use "slash and burn" method of clearing land, which has been blamed for the loss of soil fertility and serious erosion. Southern and LSU experts are studying ways to restore fertility through crop rotation and fertilizers.

In Kenya, Charles White, an agriculture extension specialist from Virginia State University, is heading a team of U.S. professors as part of a $50 million project to improve Egerton College, one of Africa's best known agricultural training institutions. The project is contracted through the Southeast Consortium for International Development (SECID). SECID professors are taking over the teaching duties at the college while Egerton faculty members work toward advanced degrees in the United States.

Prairie View A&M University has enjoyed the reputation of training most of the black engineers in the United States. Currently several of its professors are helping design and build training facilities at Liberia's Booker T. Washington Agricultural and Vocational Institute. Liberia desperately needs technicians to carry out its long-term development.

In recent years, AID has helped strengthen black colleges and universities so they can assume a larger role in international development. According to current regulations, some 17 black schools can qualify for participation in U.S. government-funded development projects. The schools are the 1890 state land grant institutions and a number of colleges classified as "historically black." AID also awards a number of Title XII "strengthening grants," which assist many of these colleges to upgrade their research capabilities to handle overseas development projects.

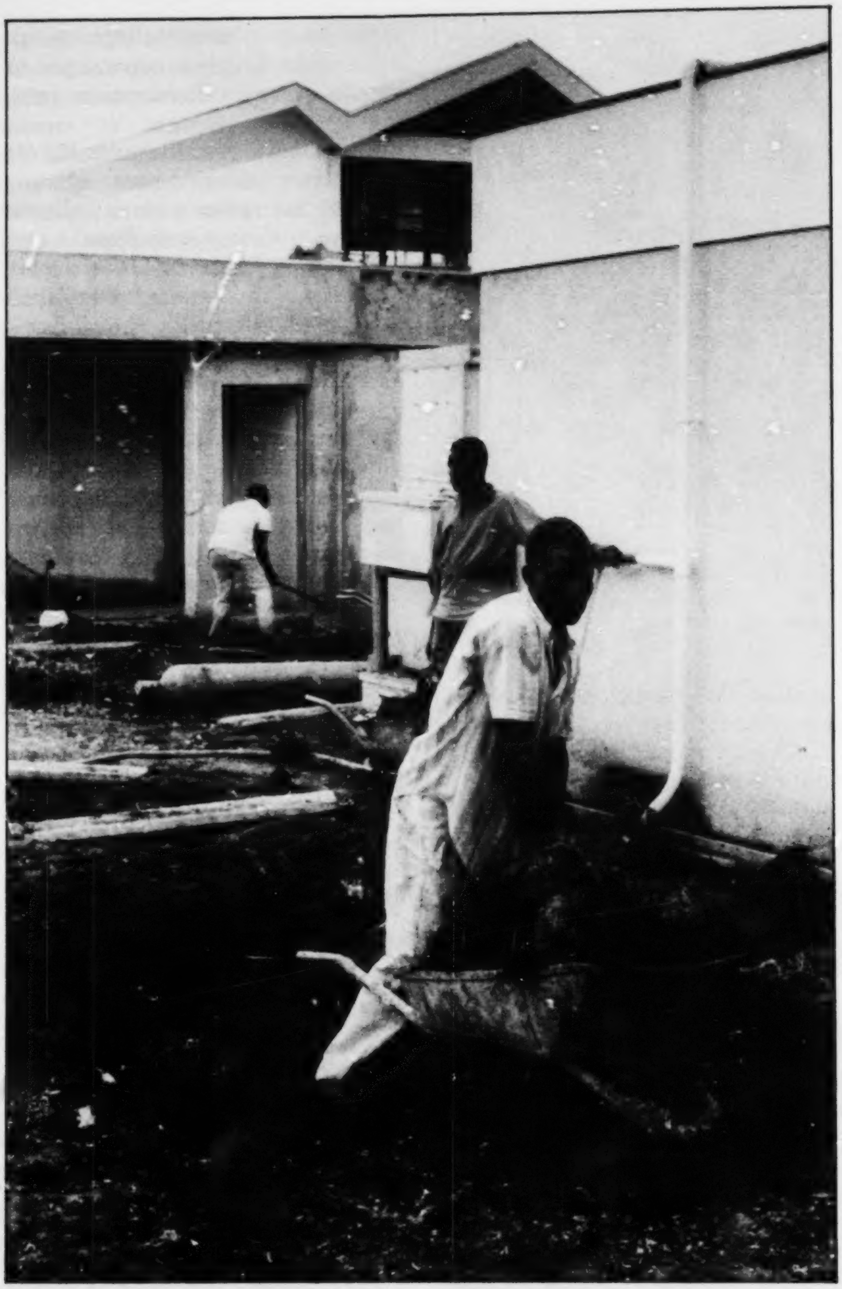
Suchet Louis, a professor at Tuskegee Institute, and Sauver Mahotiere, a horticulturist from Ft. Valley State College inspect traditional tools.

According to Fred Richards, BIFAD agriculture development officer, most of the nation's black colleges improved their agricultural and rural development faculties during the 1960s. This was accomplished with funding from the U.S. Department of Agriculture. Before that, hardly any federal funds for this purpose went into these schools.

Richards, who is still a Prairie View staff member, is on loan to AID under on Intergovernment Personnel Agreement. His role is to encourage the participation of 1890 institutions in AID-assisted projects.

Robert Huesmann of BIFAD says AID is trying to include these colleges through the strengthening grants and through increased participation in its country programs. Despite these efforts, Huesmann feels that most of the schools are handicapped by a lack of research and relatively small numbers of faculty for long-term development projects overseas. "None of the

SECID advisors from U.S. schools examine the construction of a poultry center in Upper Volta.



Students at Egerton College maintain animal pens as part of their daily routine.

'1890s' have doctoral programs. That means they haven't fully developed the research capacity they need. If you have doctoral programs, you can attract a greater number of Third World students and this strengthens your international standing."

The predominantly black colleges suffer from many of the problems that now deter larger, predominantly white institutions from doing more overseas research and development projects. The uncertainty of AID funding levels, an emphasis on short-term development projects; and the insecurity of Third World political climates are serious drawbacks to involvement by American colleges in general.

"The '1890s' have certain skills because of their historic involvement with the poor, their vocational and agriculture and extension programs," Huesmann notes. "In many areas of the world they would have a certain advantage of larger white institutions."

Arthur Henderson, of Southern University's overseas development staff, says:

"It's hard to relate to the problems of rural people unless you have experienced some of those problems. The larger schools have more money than we do and more people who are trying to write books. But I think we identify more closely with the problems of the Third World, especially Africa. For example, I can remember that not too long ago, there was no running water, outdoor toilets or other conveniences in many parts of the South."

AID's source list of predominantly black schools indicates that many of them compare favorably with larger institutions in terms of expertise in agriculture, health, nutrition and education. Alabama A&M University in Normal, for instance, is one of the nation's top schools in triticale (hybrid of wheat and rye) research; the University of Maryland Eastern Shore has an excellent reputation for training extension agents; Prairie View has an outstanding international center for dairy goat research; Houston's Texas South University, with 2,300, ranks as one of the nation's top schools for training foreign students and through its Teacher Corps-Peace Corps Program has placed a number of former students in administrative positions in AID and other agencies.

Predominantly black colleges are clearly an untapped resource for overseas development despite limited funding and comparatively few tenured professors who can be detailed overseas. ☐

Emmett George is a public information officer in AID's Office of Public Affairs.

WHICH COSTS MORE:

AID OR NO AID

Without attention to global problems, even problems at home may be unsolvable.

by John W. Sewell

In the last 12 months, a number of detailed analyses have warned that continued indifference to the needs and wants of poor people and poor countries could have disastrous consequences. These studies also advised, however, that a U.S. response would improve the prospects not only of the poor countries but of the United States as well. At the start of a new decade and a new Administration, it is important to examine what the U.S. interest and the U.S. role in Third World development are.

In early 1980, the report of the Presidential Commission on World Hunger, a commission composed largely of private U.S. citizens, concluded: "There are compelling moral, economic and national security reasons for the United States government to make the elimination of hunger the central focus of its relations with the developing world. . . . "Purposeful use of U.S. power would . . . focus and shape the idealism and generosity that is so indigenous to the American spirit."

Around the same time, the Brandt Commission (formally called the Independent Commission on International Development Issues)—a prestigious group of business representatives, former government officials, and intellectuals from five continents—released its report after two years of arguing, negotiating, and learning from one another. The commission wrote: ". . . The achievement of economic growth in one country depends increasingly on the performance of others. The South cannot grow adequately without the North. The North cannot prosper or improve its situation unless there is greater progress in the South." The report spelled out more than 90 specific actions the international community could take that would alleviate the financial, environmental, and human crises that appear to be coming. Of the report, Peter Peterson, chairman of Lehman Brothers Kuhn Loeb and one of the members of the commission, has said that the alternatives to working on negotiations to bring about change are "huge and continued economic shock; a billion people literally starving; an international financial system that could be in a state of economic crisis. . . . We have to try, if only because the stakes are too high not to try."

In the summer of 1980, yet another major statement was made about the long-term prospects facing this ever-smaller planet. "The Global 2000 Report to the President," an interagency U.S. government study, warned: "If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically and more vulnerable to disruption than the world we live in now. . . . Life for most people on earth will be more precarious in 2000 than it is now—unless the nations of the world act decisively to alter current trends."

These are not partisan statements. Nor are they condemnations of the actions of any group, party, or set of officials. Rather they highlight problems that cannot be solved in the span of a single congressional term or even a two-term administration. Unless the world begins to address them, the lives of not only the world's poor but also its rich are not likely to get better and will probably get worse.

The U.S. role in solving the global problems described in detail by the Global 2000 study, the Brandt Commission, and the Presidential Commission on Hunger has been the particular focus of the Overseas Development Council (ODC). In the process, it has become clearer and clearer that not only does this country have a moral obligation and a security interest in addressing these global concerns, but even the "domestic" troubles with which we currently are preoccupied—energy, inflation, unemployment, slow growth, immigration—cannot be resolved without attention to the developing countries. These countries as a group (and some of them individually) are now significant actors in the world's economic system. Their control over oil, their ability to provide low-cost consumer goods, their growing markets for industrial-country exports, their position as major suppliers of key raw materials, and their growing involvement in the world financial system all affect the U.S. economy directly. It is therefore imperative that the United States recognize these relationships and begin to take both immediate and longer-term steps to bring its policy into accord with changing realities.

In ODC's "Agenda 1980," two major long-term development tasks for the decade were set forth: (1) to resume economic growth, provide employment, and reduce inflation, and (2) to take major steps to eliminate hunger and other aspects of absolute poverty by the end of the century. These are not tasks for the United States to undertake alone. They will require the commitment and cooperation of all countries. Yet the United States, in particular, must recognize that its official actions and those of its private sectors—profit and non-profit—affect the lives of billions of people and that its contribution to a program of global cooperation therefore is vital.

In order to make that contribution, however, the United States must first redefine and expand the concept of its own "national security," decide what it needs and wants from changes in the international economic order, and develop a leadership style to deal with the domestic limitations on a development cooperation policy. Let us look briefly at each of these three tasks.

Expanding the Concept of National Security. U.S. policy to date has viewed developing countries primarily from the standpoint of how they figure in the strategic relationship between the United States and the Soviet Union. Defining U.S. security solely in military terms, however, obscures our equally important economic and political foreign policy objectives in the Third World. Military force has little impact on population growth, deforestation, or migration.

Identifying U.S. Needs. So far, the United States has put more emphasis on attacking developing-country demands for a "new international economic order" than on putting forth imaginative proposals of its own. The United States urgently needs to set its long-term goals and to weave its various policies into a coordinated and comprehensive strategy.

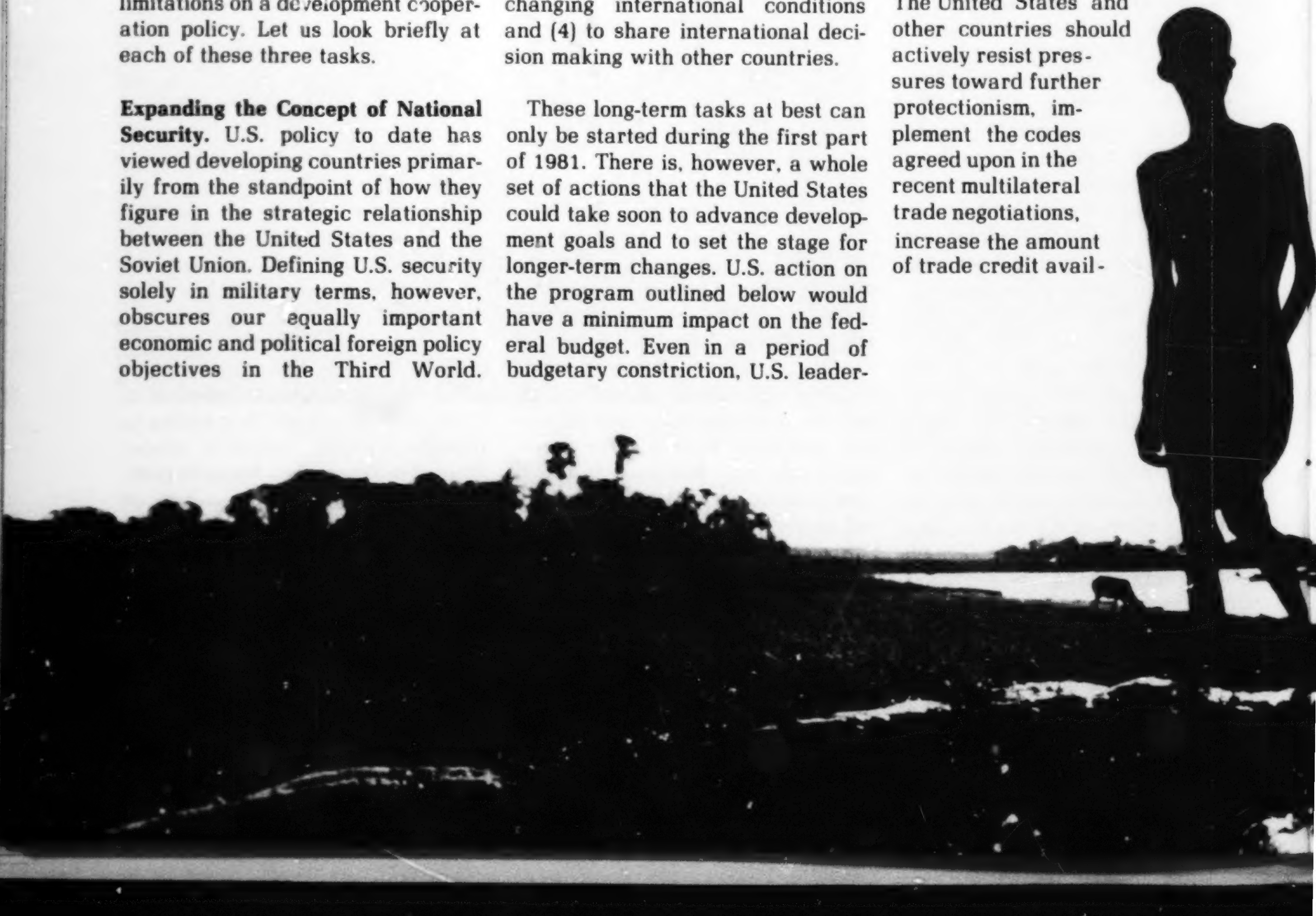
Exercising a New Kind of Leadership. The changing nature and relationship of domestic and international problems requires a new kind of leadership. An imaginative, forward-looking approach is needed (1) to cope with global problems even in the face of competing national interests, (2) to organize the U.S. government to deal more creatively and efficiently with developing countries, (3) to deal with domestic economic dislocation resulting from changing international conditions and (4) to share international decision making with other countries.

These long-term tasks at best can only be started during the first part of 1981. There is, however, a whole set of actions that the United States could take soon to advance development goals and to set the stage for longer-term changes. U.S. action on the program outlined below would have a minimum impact on the federal budget. Even in a period of budgetary constriction, U.S. leadership on such a program would greatly help to prevent further deterioration in the global economy and could go a long way toward meeting this country's long-term interests. In other words, the real costs of acting on these proposals will be far less than the costs of not acting.

The short-term program of action proposed in the Overseas Development Council's "Agenda 1980" includes:

Improving the World's Monetary System. The United States should support measures to augment the revenue of the International Monetary Fund (IMF), increase the Special Drawing Rights (SDRs) available to developing countries, make conditions attached to IMF loans less stringent, increase private lending and double the amount of money the World Bank may lend (which can prudently be done even without expanding its capital base).

Sustaining World Trade. The United States and other countries should actively resist pressures toward further protectionism, implement the codes agreed upon in the recent multilateral trade negotiations, increase the amount of trade credit avail-



able to developing countries, and resume negotiations to stabilize the prices of many primary commodities exported by developing countries.

Improving World Food Security. The United States should press to reopen negotiations on an international wheat reserve, increase support for expanding agricultural production in food-deficit developing countries, and increase the amount of emergency food aid available to countries or regions hard hit by short-term food shortages (e.g., the countries of sub-Saharan Africa, troubled by a second year of drought and large numbers of refugees).

Increasing Energy Security. The United States should work with others to explore the possibility of an international agreement on oil and to increase international cooperation in finding and producing more oil and gas and in developing new energy sources, particularly in the developing countries.

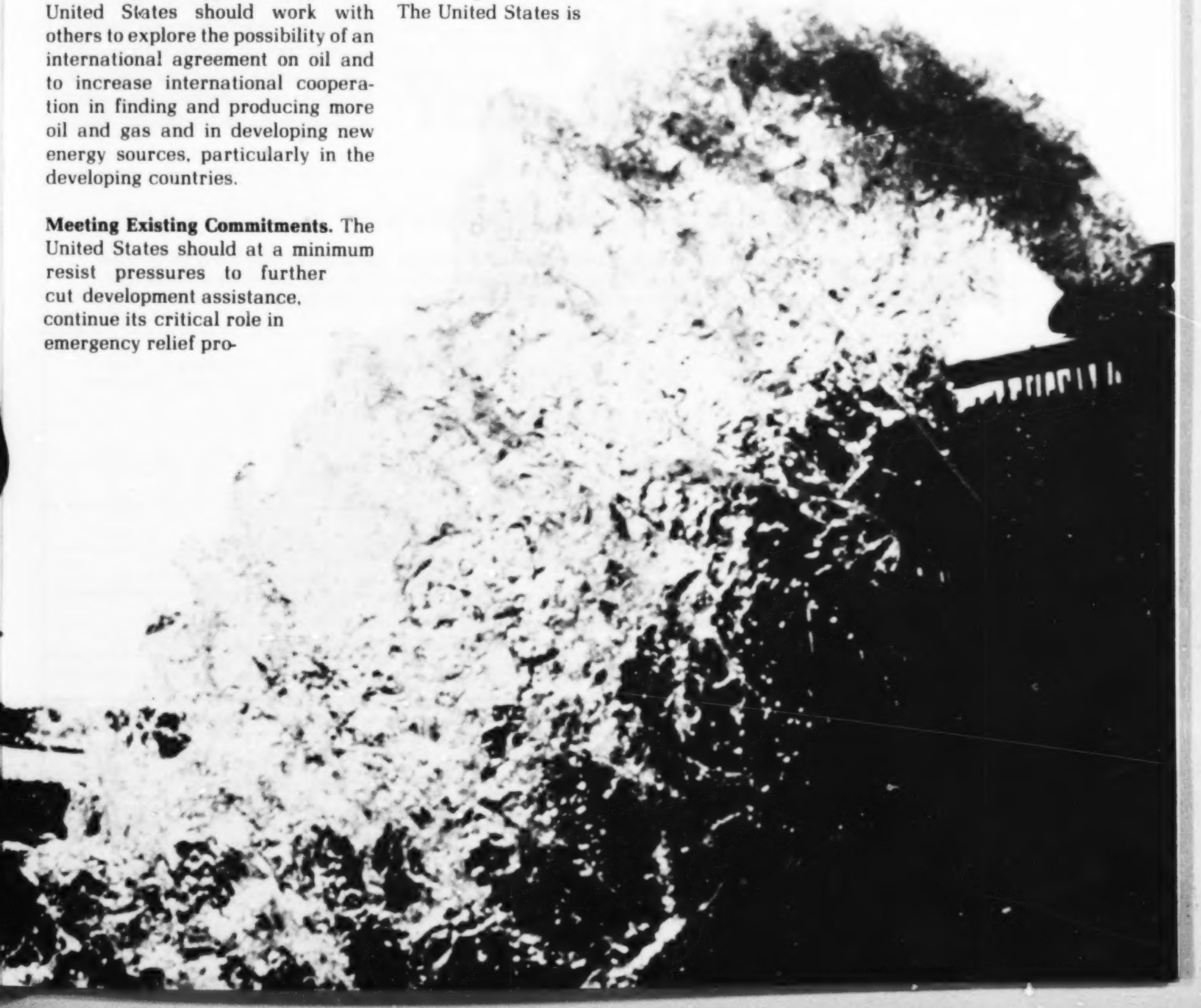
Meeting Existing Commitments. The United States should at a minimum resist pressures to further cut development assistance, continue its critical role in emergency relief programs and meet its pledges to multilateral institutions.

Pledging Increased Future Support. The United States should commit itself to increasing its development assistance. It should create (along with other countries) a special program to help low-income countries, make repayments on past development loans available for current needs, and explore various forms of "automatic" transfers.

Neither the short-term nor the long-term actions outlined here will solve the world's human or economic problems—but they could go a long way toward bringing about improvement for rich countries as well as poor countries. The United States is still a major economic power, and its official actions as well as the decisions and actions of its private banks and private voluntary organizations affect people in other countries as well.

For all its current difficulties, the United States could do much to resolve the deadlock that has dominated so many international discussions. □

John Sewell is president of the Overseas Development Council. This article is based on the Council's report, *The United States and World Development: Agenda 1980*, published in September 1980.



ENERGY: Top U.S. Foreign Policy Concern?

Yes, says a survey of business, academic and government leaders.

Energy should be this country's top foreign policy priority in the 80s, say more than 80% of American business, government and academic leaders surveyed recently. In con-

Contributing to the Development Process of the Third World

Many possibilities for contributing to the development process of the less developed countries (LDCs) in the Third World have been proposed. For each of the policy options listed below, please check the column that most nearly reflects the extent to which you personally agree or disagree with the option.

	1. Fully Agree	2. Partially Agree	3. Neutral	4. Partially Disagree	5. Fully Disagree
1. U.S. should significantly expand bilateral official foreign aid programs to LDCs	28%	34%	13%	16%	9%
2. U.S. should expand public-private cooperation on funding development projects	41	40	12	5	3
3. U.S. should encourage LDCs to rely primarily on private development capital	14	33	12	31	11
4. U.S. aid should go primarily to the poorest LDCs, with less emphasis on the more developed LDCs	9	26	12	33	20
5. U.S. aid should go primarily to the newly industrialized countries (NICs) as "multiplying forces" to reach the more impoverished nations	5	30	23	31	11
6. U.S. should open its market and encourage other developed nations to open their markets to LDCs	39	47	7	6	1
7. U.S. should take a firmer stand in negotiations with LDCs, making sure that technology or management transfer is countered with increased business growth and profitability for the U.S.	20	31	17	23	10
8. U.S. should maintain a "hands off" policy so that each nation pursues its development on its own	3	14	14	34	35
9. The current LDC debt load should be rescheduled	12	41	25	15	8

trast, the U.S. contribution to development of the world's poorest nations ranked seventh among nine top priorities named.

The survey of 750 people was conducted by the International Management and Development Institute (IMDI) and the Council on Foreign Relations (CFC), private, non-profit organizations based in Washington, DC, and New York City, respectively. All of these polled were IMDI and CFC members. IMDI is an educational institute working to promote cooperation and understanding among corporate and government executives. Its funding comes primarily from corporations. CFC is made up primarily of academicians and government officials.

The survey covered a wide range of foreign policy issues. Of those who responded, 34% were from business, 16% from government, 18% from the academic world and a smaller proportion from the media and other private non-profit groups.

On the subject of business growth in the '80s, most respondents felt that NATO countries—which include most of the industrialized countries—offer the best potential for international business market. They ranked Asia a close second. Latin America, troubled recently by social and political unrest, ranked third, Africa last.

Although most believed foreign aid should not be a high priority in coming years, they rejected a "hands-off" policy. Instead they favored active U.S. involvement in the Third World through private commercial and market mechanisms, as opposed to direct aid programs, with protection for U.S. business interests.

Two development approaches were strongly favored: opening U.S. and other industrial markets to developing countries; and expanding public and private cooperation on development projects.

The survey results are generally in tune with recent surveys of the general public.

Some slight differences among

The Foreign Policy Posture of the United States in the 1980s

There is a great difference in perception of where America is headed in the field of foreign policy in the decade ahead. For each of the foreign policy postures listed below, please indicate by checking the appropriate column whether you think each is "very likely," "somewhat likely," or "not at all likely" to happen in the 1980s.

	1. Very Likely	2. Somewhat Likely	3. Not at all Likely	Rank
1. An "inward-looking" posture . . . adapting to limited energy and other resources, slowed growth and income—severely limited commitments abroad	10%	37%	53%	3
2. A "limited power" posture . . . restoring a sound domestic economy and maintaining involvement, but not leadership in world affairs	22	61	17	2
3. A "leadership without dominance" posture . . . restoring economic strength at home and military/economic leadership abroad, making stronger military commitments where necessary, emphasizing coordination with allies	47	47	6	1
4. A "strongly assertive" posture . . . restoring military/political/economic strength and influence (at the expense, if necessary, of domestic social programs), with primary emphasis on meeting Soviet expansion by force, "going it alone" if necessary	6	38	56	4

Regardless of what you think actually will hapoen in the 1980s, please check the one policy option that you personally would most prefer to see happen.

		%	Rank
1. The "inward-looking" posture	1.	0	4
2. The "limited power" posture	2.	7	3
3. The "leadership without dominance" posture	3.	80	1
4. The "strongly assertive" posture	4.	12	2

respondents were noticed. Government people were less disposed than those from business to a stronger U.S. government stand in negotiations with the Third World. Government respondents also were more committed to basing foreign policy on case-by-case human rights assessments.

In summary, responses indicated a trend toward a realistic acceptance of international responsibility, and a desire to cooperate with U.S. allies and the developing world.

Copies of the survey may be obtained from IMDI, 2600 Virginia Ave. NW, Suite 905, Washington, DC 20037.

Areas of Opportunity for Business Growth

Opportunities for Growth: Where do you think the best opportunities for international business will be in the 1980s? Please rank in order the areas listed below with "1" being the area of greatest opportunity, and "5" being the area of least opportunity.

a.	NATO (Europe, Canada)	1	(63%)
b.	Middle East/Persian Gulf	4	(30%)
c.	Latin America	3	(41%)
d.	Asia	2	(60%)
e.	Africa	5	(8%)

Foreign Policy Objectives

As you view the decade of the 1980s, how would you rate the importance of each of the following foreign policy objectives? Please indicate in the columns to the right whether you think each objective should be of "highest priority," of "priority," or of "lower priority."

		1. Highest Priority	2. Priority	3. Lower Priority	Rank
A.	Countering the Soviet challenge	52%	41%	8%	4
B.	Expanding international trade and investments	39	50	10	6
C.	Contributing to the development process of the Third World	22	53	25	7
D.	Strengthening rapprochment with the People's Republic of China (PRC)	12	64	24	8
E.	Building strong defense and economic relations with major allies (Europe and Japan)	61	36	3	2
F.	Stabilizing and strengthening the Middle East	54	41	5	3
G.	Formulating a viable energy policy	82	16	1	1
H.	Developing a foreign policy based on U.S. concepts of "human rights" and democratic principles	7	28	65	9
I.	Strengthening U.S. military/defense capabilities	48	44	9	5

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WHAT THE MEDIA SAY...

The incoming administration has major opportunities both for new approaches and for catastrophic missteps. Global economic negotiations have stalled, but the underlying causes of economic distress remain. Will the U.S. face squarely the issue of global poverty, even if we object to the proffered solutions? If we promote capitalist, export-oriented development models such as Taiwan and South Korea, will we accept the need to open the U.S. market to their products? If we abolish or drastically cut aid, where do we expect the poorest Third World countries to get the capital and technical know-how to stave off disaster? U.S. leadership must consist of more than saber rattling.

—Frank C. Ballance
Christian Science Monitor

Whether the Republicans can accept the fundamental decline in America's economic and military power abroad is the basic question for their policies toward the Third World. Acceptance will put us on the road to making necessary adjustments to the new international system signaled by the Arab oil boycott of 1973-74. It will also guide us in creating political patterns and methods of communication urgently needed in our evolving relations with peoples whose economic viability intermeshes with our own. The Soviet Third World's grip on vital resources and its demonstrations of will can be ignored only at our peril.

—Henry F. Jackson
New York Times

Meaningful and genuinely needed foreign assistance can be an important and effective foreign policy tool—not in forcing recipient governments to become U.S. puppets, but in increasing American influence and leverage with those governments. We are missing quite a few bets in enhancing our standing with many nations by the shortsighted and selfish attitude we have assumed toward foreign aid. Our meager ratio of assistance looks even more anemic when one considers that nearly 40% of total American foreign assistance this year is going to two countries—Israel and Egypt.

—Journal
Beaumont, TX

The real competition to Central America and the Caribbean is between economic and political models that can bring both development and stability. Latin American observers believe Reagan advisers must address these issues to formulate an effective long-term policy toward the region.

—Alan Riding
New York Times

The real energy crisis is not oil but wood, and no one will escape the effects of a balding Earth.

—Newsweek

More than half the grain that moves in international commerce grows in America's rich farmlands. In an age when resources are power, this is power that would command the respect of an oil sheik. During the past year of disappointing harvests, the world's grain reserves shrank from a 55-day supply to only 35 days. Consumption outstripped production by 3%. Obviously, as population explodes, hunger equates with political upheaval. America's $40 billion in agricultural exports cannot be divorced from foreign policy.

—Baltimore Sun

When a Third World government is in jeopardy, outside assistance may be able to save it. But only a case-by-case analysis can determine whether our interests are truly vital and endangered, whether a helping hand could keep the sinking government afloat, and how expensive the bailout exercise would be. In general, the cost would be prohibitive whenever a regime's base has withered but its opposition enjoys broad and passionate support. When pump-priming would be costly and of dubious value, we should instead reassess our commitment to the disintegrating regime and consider untying ourselves from a loser.

—Richard E. Feinberg
New York Times

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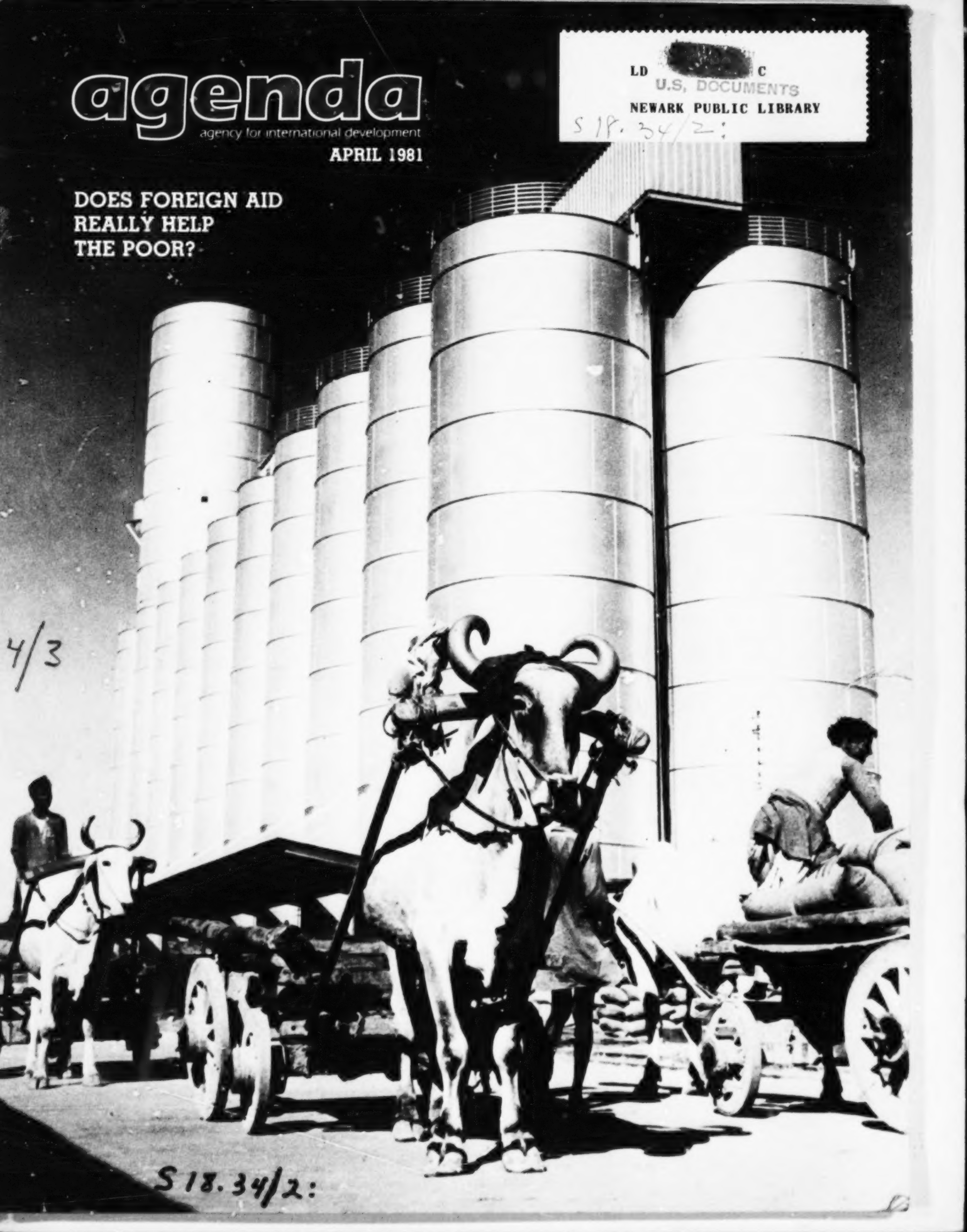
DOES FOREIGN AID REALLY HELP THE POOR?



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DEVELOPMENT UPDATE

A Woman's Lot (cont.) "Carrying water is a task that only women perform," says Eddah Gachukia, member of Kenya's parliament. It becomes even more arduous and time-consuming when women are being encouraged to practice better hygiene in the home, and their need for water correspondingly increases. The improvements demand that they travel to and from the river several times a day, or carry two or more water containers at a time. This is very strenuous, especially for the old and for expectant mothers."

Nearly 30% of the world's population—814 million people—cannot read or write, according to a UNICEF report.

Rapid urban growth is common throughout the Third World: Cairo, Lagos, Jakarta and Mexico City are among the fastest growing cities in the world. But only in Latin America do cities contain the majority, or nearly the majority of the national population. For example, in Argentina 61% of the people live in cities of 100,000 or more, Chile 50%, Columbia 57%, Mexico 51%, Venezuela 60%. Mexico has added six million to its population in 15 years. According to the Population Action Council, half the world's population will live in cities by the year 2000.

The International Labor Organization estimates that 55 million children under 14 worldwide are forced to work for a living.

In our own interest: Chicago banker Roger E. Anderson says the United States should seek to narrow the widening economic gap between richer and poorer nations "in our self-interests. . . . Every world trader understands this," he said in a speech before the National Foreign Trade Convention. "So should every political leader." Anderson maintains that a sharp increase in aid without proper planning could aggravate global inflation. "However, a well-balanced expansion of world trade offers a less inflationary way of stimulating activity in most countries than increasing domestic public spending."

The new Administrator of the Agency for International Development is M. Peter McPherson. At the time of his appointment by President Reagan, McPherson was acting White House counsel. He also served as general counsel to the transition. McPherson brings to his new position a background in foreign aid. He was a Peace Corps volunteer in Peru from 1965 to 1966, coordinating 45 other volunteers in working with AID's school feeding program in Peru. He was also on the staff of the AID mission's private enterprise office and worked with the Peruvian credit union system. In 1977, he was sworn in as a member of the Board for International Food and Agricultural Development, whose responsibility—in cooperation with AID—is to encourage U.S. universities to participate in stimulating food production and sound nutrition in developing countries. In 1969, after receiving a master's degree from Western Michigan University and a law degree from American University, McPherson became a tax law specialist in the Internal Revenue Service. Six years later, he joined the Ford White House as deputy director for presidential personnel and special assistant to the President. In 1977, he joined the Washington office of an Ohio-based law firm.

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agency for international development

Cover: Ox carts juxtaposed against modern grain elevators in India reflect the complexities of, and occasional paradoxes in development. Today more and more people are asking the question: Does foreign aid really help the poor? AID's John Sommer takes a hard look. See article on Page 2.

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DOES FOREIGN AID REALLY HELP THE POOR?

It is time to answer questions like this—candidly.

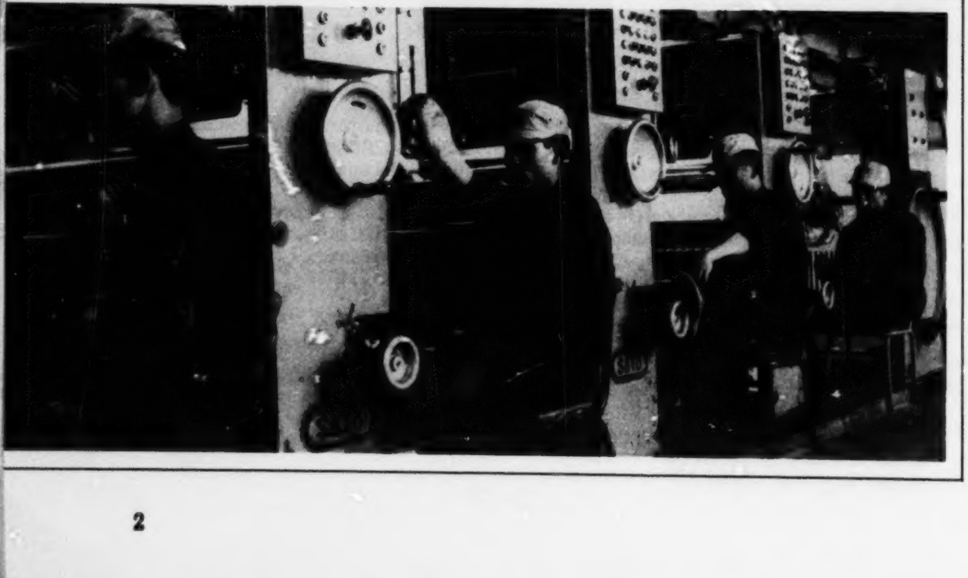
by John G. Sommer

Does foreign aid really help the poor? And if so, does it point toward self-sufficiency over the long term—or merely trap the poor in a state of continuing dependency?

In these times of increasing scrutiny of the effectiveness and efficiency of government programs, such questions need to be asked—and answered with candor.

More than seven years have passed since congress enacted the "New Directions" legislation of 1973, focusing U.S. foreign assistance efforts on helping the Third World poor meet their basic needs (food, shelter and health care, for example). The "New Directions" represented a departure from the "trickle-down" approach to development, which assumed, often incorrectly, that large-scale capital investments (dams, industrial plants, and the like) would benefit the poor over time by creating new employment and economic growth—that the benefits would "trickle down." This fundamental change in the thrust of U.S. development assistance reflected both doubt that the "trickle down" theory held water, as well as a new concern with meeting the immediate needs of millions of desperately poor people. The change has been followed by somewhat similar redirections on the part of other donor nations and multilateral institutions, such as the World Bank.

Korea, once called a "basketcase," is prospering today.



While efforts have been made recently to focus all forms of assistance on meeting basic human needs, each form is distinct from the others and merits elaboration. *Development assistance* (approximately 31% of the total) is what its name implies; it is allocated primarily on the basis of need and the ability and commitment of the country to put assistance to work to help the poor. *Economic Support Fund* aid (approximately 39% of total) is motivated by the United States' more frankly political, national security interests; in recent years most of these funds have helped to buttress the Middle East peace process, largely to enable Israel and Egypt to stabilize and develop their economies while cementing their new-found peace with each other. *Food for Peace* (approximately 30% of total) meets three types of need: humanitarian and economic need, often imposed by disaster; national balance-of-payments problems, whereby food substitutes for cash to help the country conserve foreign exchange otherwise required to buy food; and U.S. political, national security, and trade needs.

The following discussion will deal only with the category of development assistance since it alone is directed exclusively toward helping the poor.

The first question inevitably is: Where does AID's money go? Eighty-one percent of AID's in-country development assistance funds are provided for countries with per capita incomes under $625 per year, and

61% to those with incomes under $360. However, it is wise to remember that per capita income both excludes key areas of economic activity—subsistence farming, for example—and masks discrepancies in standards of living between rich and poor, so that countries enjoying high per capita incomes may include large numbers of very poor people.

The second and more important question is: How effective are our foreign and efforts? This can be assessed in two ways: first, by the extent to which aid contributes to a country's overall economic growth, and, second, by the degree to which aid fosters social justice and equity. For development to occur, both growth and equity are clearly necessary. The results of growth without equity can be seen from much of the 1960s experience of development. Then, countries as diverse as Brazil and Pakistan saw their economies grow, but they also saw the numbers of their poor increase rapidly and the gap between rich and poor widen. The results of equity without growth are just as visible in countries such as Tanzania and Jamaica: the gap between rich and poor diminishes to varying extents, but at a lower level for all, and with national bankruptcy never far away. Indeed, the perils have become even greater since the dramatic oil price rises since 1973, the worldwide inflation that ensued, and the staggering burden this has placed on poor countries in particular.

To the extent that a country's economic growth is a precondition for helping its poor people, foreign aid has proved successful in many areas of the world. For example, India, described until recently as the world's archetypical "basket case," last year achieved the ability to produce all the food grains it will need for the next 20 years, according to the World Bank. While this achievement is due primarily to India's own efforts, it also is due in part to the United States and other donors for new high-yield varieties of wheat and rice, for the creation of Indian agricultural training and research institutions, for expansion of fertilizer production, and for the needed storage facilities. India is not alone. Korea, in the 1950s, also was known as a "basket case." In 1963, its per capita income was $82; by 1980 it was $1,500. The country is now a world competitor in several industries, with exports totaling over $15 billion. Nine Korean companies are listed among the Fortune 500. Visitors returning to Korea quickly see how much better off rural areas, too, have become. To Korea's achievements the United States contributed policy guidance on land reform and capital mobilization, and financial assistance for fertilizer production, irrigation, and management training, among many other forms of assistance. In 1980 Korea "graduated" from the AID rolls.

Research and years of work have enabled India to feed itself.

Important gains in social services have contributed to both growth and human welfare. Last year the World Health Assembly announced that smallpox had been wiped out, thus saving 10,000 lives a year by some estimates. The United States, having contributed $27 million as well as technical assistance and leadership to the eradication effort, shares much of the credit for this victory. The U.S. investment has been repaid many times over already. Because routine vaccination is no longer required, that same $27 million is now saved—in the U.S. alone—every three months. Worldwide the savings amount to about $1 billion each year.

In the area of population planning, AID-supported programs have had some effect. For example, 675,000 fewer babies are born each year in Indonesia, as a result of that country's population growth rate declining from 2.4% in 1969 to 1.9% by 1980. Slower population growth means there are more resources available to each person and family —an important consideration in a country which, notwithstanding its oil wealth, is still very poor.

Through family planning, 675,000 fewer babies are born in Indonesia each year.

In Colombia, building roads has meant jobs and higher income for many people.

If the case for AID's success in promoting growth is relatively easy, the case for equity is more elusive. In part, this is because AID's explicitly equity-oriented projects are relatively recent and therefore still difficult to pursue. Lastly, it is because the poorest groups have endured discrimination for so long that reaching them, and gaining their confidence and involvement in development activities, is difficult.

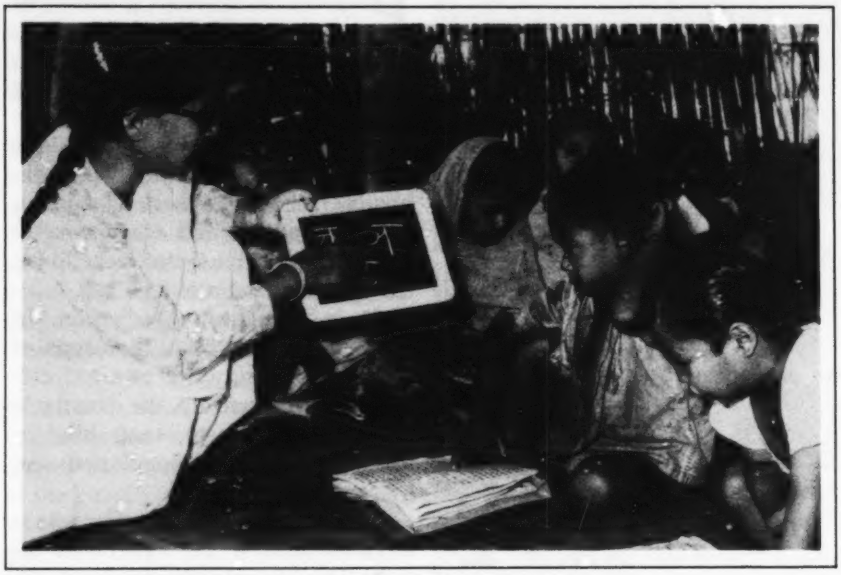
Nevertheless, there has been progress. An impact evaluation of an AID-supported roads project in Colombia, for example, shows that not only did the roads open up isolated, economically depressed areas, but road construction also provided work for hundreds of previously unemployed people. These people have used their new earnings to improve their houses and buy fertilizer and seeds for their fields. Higher income was the major long-term result of the road project, since the roads both lowered the cost of transporting produce to market and stimulated more production. To be sure, not all road projects are as successful as the one in Colombia. Problems occur when the local people are not encouraged to participate in the project, since their interest in using and maintaining the road is essential. Problems also occur when no thought is given to the availability of seeds, fertilizer, social services, and other facilities needed to complement the new road.

As any traveler in the Third World—or indeed, in much of the western United States—can attest, a critical barrier to growing food is lack of water. Much of India's success can be traced to irrigation, primarily in large systems in the relatively better-off parts of northwestern India that have generated the recent grain surpluses. Do the poor also benefit from such efforts? According to a 1980 AID impact evaluation of a small-scale irrigation project in the Philippines, more than half of those who directly benefited were subsistence farmers below the Philippine poverty level. While they were not the absolutely lowest income group, they constituted the group best able to improve their own lives—and also to increase agricultural production, particularly rice production, to make the country as a whole self-sufficient.

One could argue, of course, that a proper concern for social justice would have suggested focusing the project exclusively on the poorest of the poor. Yet the poorest people generally own no land—thus the value of small scale industries, or of road projects, for example, that can open up other opportunities to them. Or they may have land but lack the education needed to adapt to new methods. Training and setting up demonstration projects on nearby farms can help. But experience suggests that agricultural projects focusing initially only on the very poorest groups are less likely to succeed than those that begin where progress is surer and can be adapted later for use among the poorest. In Kenya, the introduction of hybrid maize seeds proved relatively less profitable to small landholders than to larger landholders, because the latter, with more land, had resources to invest in new seeds. However, the small landholders also increased their maize production and improved their standard of living.

Some foreign aid critics have argued that unless projects benefit the poorest groups at the expense of ruling elites, the result will be greater inequity; in other words, for the poor to advance, the elite must cede their status. Even if the assumption were correct, practical experience points to at least two difficulties: First, in the countries where this has been tried—Cuba, for one—the resulting equity has been achieved only with vast, continuing amounts of foreign aid (Soviet aid, in the case of Cuba) or with the people living at bare survival levels. Second, the political interventionism implicit in donors' suggesting what is tantamount to revolution would be unacceptable to most countries; elites, in short, do not self-destruct.

AID's strategy has essentially been what in U.S. terms would be described as affirmative action. For example, a number of AID's country programs include projects that either directly or indirectly support land reform, which enables the landless to receive productive assets for self-sustaining development. In the Mahaweli Basin of Sri Lanka, for example, AID is cooperating with other



Nepal's national education system was started with U.S. assistance.

donors in providing (over several years) $85 million to build an irrigation system that will bring into production 128,000 acres on which 110,000 people, nearly all landless, will be resettled. In Swaziland, AID is contributing technical assistance and institution building support to help in the purchase of expatriate-owned properties for redistribution among tribal groups. In El Salvador, which has recently been severely buffeted by violence and extreme political tensions, AID has helped transfer official land titles to some 200 renters or landless in the first phase of that country's ambitious land reform program. In addition some 212,000 families have directly benefitted from land distribution. In a number of other countries, AID has supported studies and analyses that can help set the stage for land reform initiatives.

Another example of affirmative action to achieve social justice is AID's work in education. In both Jordan and Nepal, for example, AID's role in establishing and assisting national systems of education is well known. Inevitably, in the early stages, the wealthy are likely to benefit more than the poorest; their children can afford to spend time in school rather than in the fields or in other work, and they have generally had more contact with the modern sector and thus know the value of education as a way to advancement. But as education systems expand, the poor increasingly participate. And with that participation, enhanced knowledge of nutrition, better health, employment, and improved standards of living generally follow. Insofar as education also leads to rising expectations and to new awareness of the social and economic context, in many cases the poor have come to push for equity through the political process as well. Indeed, it is not surprising that those Third World countries enjoying the greatest degree of democracy—Sri Lanka and Jamaica, for example—also have the highest rates of literacy and overall education.

In addition to AID's direct project assistance, two other forms of contribution should also be noted. First, some 10% of AID's development assistance (as well as a substantial share of Food for Peace managed by AID) is given through private and voluntary organizations. These groups, with their highly motivated personnel, have a reputation for both reaching the grassroots poor and encouraging their participation in the development process. This people-to-people emphasis helps voluntary agencies to ensure whenever possible that those most in need are favored. Second, AID tries whenever possible to work with multilateral and other bilateral donors to help host governments on the policy issues that influence development. Policy may be more influential than any number of field projects in realizing either growth or equity. For example, if governments offer too low a price for farmers' crops, those farmers will not be encouraged to grow more, whether or not they are offered better seeds or irrigation facilities through AID or voluntary agency projects. Because Third World governments inevitably face their own internal political constraints, policy assistance is difficult to both give and receive. Because of the particular sensitivities surrounding the issue of equity (elites do not self-destruct), policy guidance in this area inevitably must be subject to compromise. In many countries, progress toward social justice is admittedly slower than desirable; many people have said the same about the United States. In this sense, seven years under the "New Directions" legislation is a short time. Yet even in this span, most Third World governments have come to recognize the need for equity, and significant numbers of Third World officials and citizens have received policy and management training and have been made aware of the issues and alternatives.

AID's role, beyond its projects, is to participate with host governments in constructive policy dialogue that recognizes the plight and the rights of the poor—and their role in achieving peace. It is not an easy task or a fast process. But in the absence of a better way, it appears the only right course to follow. ☐

John G. Sommer is executive director of AID's advisory committee on voluntary foreign aid.

by Peggy Streit

ONE MAN'S LEGACY

AID's Frank Parker cultivated India's Green Revolution.

Progress in developing countries is the result of the efforts, ideas, perseverance, courage and inspiration of many people. But occasionally a single person, or a small group, provides the driving force for a decisive step forward. Today "old India hands" recall the work of such a group of Indians and Americans 30 years ago and give it major credit for the fact that India is now self-sufficient in food-grain production. In 1950 India grew 52 million tons of food grains; today it grows 133 million tons, permitting the country's food production to keep slightly ahead of increased population—an awesome achievement.

At the center of that group was a former official of the Agency for International Development—Frank W. Parker, a tall, white-haired, self-effacing, grass-roots aristocrat, now savoring retirement in the blue-gray foothills of South Mountain near Gettysburg, PA. "In my view," says Erven Long, with AID's Office of Development Support and a colleague of Parker's in India, "Frank Parker is the most influential American of-

"I am haunted by memories of the India I knew when I was posted there in the 1950s and 60s," remembers an American journalist. "I used to drive frequently from New Delhi to Chandigahr in the Punjab region. On the way I passed a large town dump where women fought with dogs for scraps of food. Even then the Punjab was known as the breadbasket of India, but somehow that dump seemed to embody the hopelessness that appeared to characterize the country. Hungry, sick, emaciated people and animals—scraggly fields, filthy wells, antique agricultural practices. . ."

ficial ever to serve in India. I am convinced that back in the early 1950s he put Indian agricultural development on the right path."

John Malcolm, AID's expert on fertilizers, speaks with frustration and exasperation of American cynicism about the U.S. foreign aid program. "Americans should know what Frank has done," he says. "They should know the contribution the United States has made to India's progress. The Indians know."

And the Indians, indeed, are generous with their praise.

In a letter to Parker, C. R. Ranganathan, former executive director of the Fertilizer Association of India, wrote: "It is not often that it can be said of a single man that he brought about a profound change in the attitudes and thinking of a technical ministry like the Ministry of Food and Agriculture in the short space of five or six years, but I do believe it is true of you. . . ."

In 1970 The Punjab Agricultural University conferred on Frank Parker an honorary degree of doctor of science. The citation read: "Dr. Parker

A child in a Calcutta orphanage is fed U.S. food.

is a distinguished American, an outstanding world citizen and great friend of India. He has played a key role to further the cause of agricultural education, research and development in India."

Two Indian historians, writing in "A History of Agricultural Universities," say this: "Dr. Frank W. Parker (of the Agency for International Development) and Dr. R. W. Cummings (of the Rockefeller Foundation) are the two great figures of the history of agricultural education in India. . . . The USAID programme . . . has been of considerable significance in this period of unprecedented institution building."

Parker's American colleagues sing a similar tune. "I always think of Frank as the catalyst for many of the critical decisions and actions that were made in those early days," says Erven Long. "He was the right man in the right place at the right time. He had vast experience in the United States with soils and fertilizers and the impeccable credentials the Indians admire. He brought people together, gave them confidence, inspired them, manipulated the foreign aid bureaucracy and made it work. He had the big picture and the forcefulness of personality to bring it to life. The Indians were also blessed with talented and dedicated men and one of their talents was having the vision to recognize Frank for what he was and put the mantle of leadership on him. He became adviser to the minister of agriculture—with his office in the ministry, right next to the seat of power."

And Frank Parker? What are his memories of those early days of investigation, analysis, planning and creation? "India's land had been farmed for millenia," the 83-year old man recalls. "Year after year crops had been taking nutrients from the soil and nothing had been replacing them. Increased food production depended on millions of subsistence farmers who had never used fertilizers, didn't understand why they should, and didn't have the cash to buy them even if they had understood. India had a small fertilizer industry—but nothing compared to what was needed to do the job."

A technician tests flour for protein content.

"Early in the game," recalls another colleague, James Blume, "I made a trip with Frank to a plant that manufactured fertilizer. Bags of it were lying on the floor rotting, and the Indians were about to cut production because the farmers weren't buying. 'Why don't you cut the price instead?' Frank suggested to the Indians traveling with us.

" 'We'd lose money,' they answered. 'But fertilizer is vital if you're going to get food production up,' said Frank. 'And at least you would get some of it moving and some use from it.' A few weeks later we were in Bombay a thousand miles away and read in the newspapers, 'Government Slashes Fertilizer Prices.' Frank chuckled. 'You have to watch what you say around here,' he said."

Parker's urging led to the creation of the Fertilizer Association of India and a national soils testing program. (Without such a program fertilizer can be useless or wasted.) He also recognized that to get the required fertilizer production, the efforts of both government and the private sector were essential and that the private sector must be greatly strengthened. Today India is one of the world's largest producers and users of fertilizer.

But probably the centerpiece of India's agricultural revolution has been its integrated agricultural education system. "Thirty years ago," recalls Erven Long, "the Indian state extension services were separate from research and teaching. Animal husbandry, agriculture, horticulture and forestry were all in separate departments. The theoretical was separate from the practical. It was all but impossible to get quick and enlightened decisions. I remember one day in Mysore State where I was working, I asked the Indians for a meeting of all the different governmental ministries and departments needed to get one small decision made. A dozen officials showed up, looked at each other and said, 'We can declare this a cabinet meeting.' Obviously an integration of these public services was vital. The best instrument for this integration was an agricultural university on the American land-grant model."

Frank Parker says that the genius of the American land-grant college agricultural system is the integration of teaching, research and practical agricultural extension work within one institution. This means, among other things, that teachers are teaching practical agriculture and research people are seeking and finding solutions to practical problems. Parker and the government of India arranged for an Indo-American team to study agricultural research and educational institutions and programs in the United States and India. The result: Five American agricultural universities—Ohio State, the University of Missouri, Illinois, Kansas State and the University of Tennessee sent teams to India to advise and help establish an American-type system. The teams were there for 16 years and left when the Indians were ready to take over.

And what of the subsistence farmer—the basis upon which any agricultural revolution must be built? "Tradition is hard to break," recalls Parker. "Indian farmers are very cautious about innovation—afraid to try something new because they can't afford to have it fail. But they're smart and they'll believe what they can see. Among the first things India's agricultural extension agents did was set up a large number of demonstration plots to illustrate new farming techniques—among them the use of fertilizers.

The centerpiece of India's agricultural revolution has been its integrated education system.

"I remember watching one of the Indian agents explaining fertilizer use to some skeptical farmers one day," Long recalls. "He was pointing to two plots of millet, side by side, one tall and sturdy and the other short and scraggly. The farmers looked and listened with disbelief, unable to accept the fact the fertilizer had made the difference. 'It must have been the rain that made that millet grow,' said one farmer, pointing to the good crop. 'But the rain didn't just rain on that piece of land, and not on this one,' said the Indian agent with exasperation. And before my eyes, I saw the beginnings of a modern farmer."

Today the seeds sown 25 to 30 years ago are being harvested. Writing in the *Times of India*, Askok Thapar reported: "The agricultural revolution . . . is growing into what can only be called a 'rural revolution.' New ideas are gnawing at the roots of tradition in almost every walk of village life. What is emerging is a new style of living. . . With each new technique he has adopted, the farmer's ideas have changed. . ."

An Indian journalist—a quarter of a century after the American journalist described a dispiriting trip over the same road—reports in the *New Delhi Statesman*: "The four-hour drive from New Delhi to Chandigahr leaves one almost suspicious that it is a stage-managed show meticulously presented to impress the visitor. . . . It is difficult to spot a single acre of land on either side of the road which has been left uncultivated, where something or other has not been sown. Dotting this landscape . . . are advertisements for high-yielding fertilizers, farming equipment, weedicides and pesticides, the beaming face of a farmer often providing the pictorial element. . . . No, there is no conjuring trick there, the evidence of prosperity is verifiable."

The fact that India today produces enough to feed its people does not mean that poverty and malnutrition have disappeared. Despite the availability of food, many people are still too poor to buy it. Nor have the new farming techniques reached all, or even most, farmers.

But India's productive agricultural system is the foundation upon which the future must be built. The foundation is there and Frank Parker, American, was present at the creation. □

Peggy Streit is editor of AID's "World Development Letter."

GLOBAL FUTURE: TIME TO ACT

New ideas for action to avert global disaster in 2000.

The *Global 2000 Report to the President*, issued eight months ago, offered a gloomy view of the world 20 years from now if governments fail to act. The result of three years' analysis of probable changes in world population, resources and environment through the end of the century, the report warned that unless nations do something now to alter the trends, the earth's capacity to support life will decrease while population growth continues to climb; there will be a steady loss of croplands, fisheries, forests, and plant and animal species; and there will be degradation of the earth's water and atmosphere—all in the next 20 years.

The *Global 2000 Report* identified the problems; it did not attempt to find solutions. *Global Future: Time to Act* is the next step. Published in January, and prepared by the Council on Environmental Quality and the State Department, this latest report answers how—how to change course and reach a different end.

Global Future is a collection of new ideas for actions the United States could take, along with other nations, for a vigorous response to urgent global problems. For example, by doubling the use of family planning services in the developing world before the end of the decade, the world could hold its population in 2000 to half a billion lower than the projected 6.3 billion.

Another idea: Sufficient reserves of basic food should be available for prompt response to a major shortage. The United States ought to join in this year's effort by the International Wheat Council to agree on the concept of nationally held reserves with international coordination at times of market strain.

The report points out that foreign assistance, while vital, is only a part of the complex pattern of trade and monetary issues, domestic policies and needed investment that influences economic development in developing countries. To improve the U.S. ability to respond to global resource, environmental and population issues, the report recommends that development and coordination of U.S. policy on these issues be centralized in one agency, preferably in the Executive Office of the President.

The study also calls for establishing a "hybrid public-private institute" to supplement the government effort, to stimulate independent analysis and discussion among industrial, labor, environmental and academic groups and the government. The Population, Resources and Environmental Analysis Institute that it recommends would have several roles, all designed to enlist private sector groups in the solution of global problems. A major part of the institute's program would be to supplement the government's capability to make accurate projections. This capacity appeared lacking in the *Global 2000* study. The institute would also further analyze government policy and "stimulate independent analyses of long-term global problems."

Why should the United States or other comfortable countries, with a seeming wealth of resources at their command, take an urgent interest in global resource impoverishment and environmental degradation? "First, the resulting poverty and misery for hundreds of millions of people is a matter of serious moral concern," *Global Future* answers. "Then, there is a profound human interest in protecting the earth's resources for generations to come. Finally, there are impelling reasons of national self-interest. U.S. political and economic security, broadly defined, is already being affected by global resource, environment and population problems—more so than is commonly understood. The effects will become far greater with time, if present trends continue."

Here is a summary of recommendations:

Population

Problem: By the year 2000 there will be almost 2 billion more people in the world. Ninety percent of the growth will occur in low-income countries, where most people are young and have their child-bearing years ahead of them. At the very least, explosive population growth makes it harder to provide decent conditions. In some areas, it is already overwhelming efforts to provide education, housing and jobs. And the attempts of growing numbers of people to wrest a living from the land is eroding the very soil, water and forests on which long-term stability and improvements in standard of living depend. Population growth in richer countries, though much slower, is also of concern because consumption per capita (especially of energy and other unrenewable resources) is much higher.

Recommendations: The United States should:

- Together with other donors and international organizations, intensify family planning over the next decade, by doubling resources and improving maternal and child health care.
- Provide more government assistance for research in contraception, suited to the needs of individual countries.
- Develop a national population policy that includes attention to stabilizing population; making family planning programs available; drafting just, consistent and workable immigration laws; improving information; and ensuring continued attention to domestic population issues through institutions.

Food and Agriculture

Problem: Population increases will strain the world food supply. While food production may expand 90% (that is optimistic) by the year 2000, the per capita increase will be less than 15%. This global estimate disguises regional disparities; food availability and nutrition levels may scarcely improve in South Asia and the Middle East and may actually decline in the poorer parts of Africa. Of particular concern is the ability to improve world agricultural yields in the face of degradation of soil and water resources and the conversion of some of the best cropland to other uses.

Recommendations: The United States should:

- Expand development assistance in the area of food in low-income countries.
- Establish an Interagency Task Force on World Agricultural Lands (on the model of the Interagency Task Force on Tropical Forests) to assess world trends affecting agricultural productivity; review current national and international responses; recommend a coordinated U.S. strategy, as part of international efforts; provide the foundation for an international plan of action.
- Lead by example in protecting and managing U.S. agricultural lands; elements in the program should include:
    - —Federal technical and financial assistance to state and local governments wishing to develop land preservation policies and soil and water conservation programs.
    - —An Agricultural Land Conservation Fund to help finance state and local conservation programs.
    - —Financial incentives to help preserve farmland and encourage conservation.
    - —Examination by federal agencies of programs affecting agricultural lands (for example, federal loan and loan guarantee programs, sewer, water and highway programs) to ensure that their actions do not unnecessarily encourage farmland conversion.
    - —Examination and use by state and local governments of growth management tools to discourage farmland conversions.
- Propose an international technical conference on conversion of agricultural lands.
- Strengthen national and international programs to preserve crop germplasm.
- Through assistance, cooperation and research programs, domestic and international, encourage the use of sustainable agricultural management techniques, including integrated pest management, more efficient use of commercial fertilizer, and biological fixation of nitrogen.
- Work actively toward a better international food reserve system.

Renewable Energy Resources and Conservation

Problem: While most of the world, rich and poor, must adjust to soaring oil prices, developing countries without their own oil are hardest hit. They are now spending $50 billion a year to buy oil—almost twice the amount they receive collectively from all outside sources for development assistance. At the same time, the world's poorest half, most of whom rely mainly on firewood and agricultural waste for fuel, face another energy crisis: dwindling supplies of firewood. This combination is aggravating already severe economic and ecological problems and adding to the difficulty of achieving economic growth.

Recommendations: The United States should:

- Support recent World Bank proposals for a major increase in assistance for growing and conserving fuelwood. AID should substantially increase its assistance for planting trees.
- Encourage the World Bank to accelerate lending for renewable energy and conservation activities and support the idea of a new World Bank energy facility.
- Develop mechanisms by which developing countries can take advantage of new energy technologies developed by the U.S. government and, so far as possible, by corporations.
- Study ways to make U.S. government technical experts in renewable energy and conservation more readily available to developing countries, including a voluntary program of short-term technical assistance that would tap the private sector.
- Participate actively in the 1981 U.N. Conference on New and Renewable Sources of Energy.
- Establish an interagency task force to develop a realistic strategy for achieving the goal of 20% of U.S. energy from renewable sources by 2000.

Tropical Forests

Problem: The conversion of forests to farm land and the demand for fuelwood and other forest products are depleting the world's forests at an alarming rate—as much as 18-20 million hectares (one hectare = 2.5 acres) each year (or an area half the size of California). Most of the loss is in the tropical regions of developing nations, where some 40% of the remaining forests may disappear by 2000. Hundreds of millions of people are already directly affected by this extremely serious and growing global environmental problem.

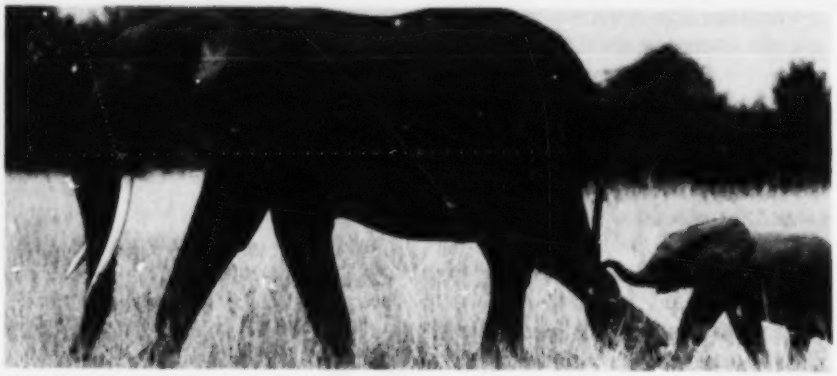
Recommendations: The United States should:

- Press for an international plan of action on tropical deforestation.
- Provide financial and technical assistance to enable the U.N. Food and Agriculture Organization to fulfill the international leadership role.
- Coordinate U.S. programs closely with the FAO and World Bank to make the best of resources.
- Designate and support the Forest Service's Institute of Tropical Forestry (Puerto Rico) and Institute of Pacific Islands Forestry (Hawaii) as "national centers" for tropical forest research, education and training.

- Call upon the World Bank to design and support an international program on reforestation of large watersheds.
- Expand the tropical forest management ability of AID and the Peace Corps.
- Pursue, through the U.S. Interagency Task Force, a new partnership of government and private industry to broaden the base of U.S. planning and improve U.S. technical contributions to international programs.

Biological Diversity

Problem: The accelerating destruction and pollution of the habitat of wild animals and plants means that in the next 20 years many species will disappear—on an unprecedented scale, as much as 15 to 20% of all species on earth. About half would go because of the loss and degradation of tropical forests, the rest principally in freshwater, coastal and reef ecosystems. Estimates of species loss often include only mammals and birds, or all vertebrate animals. The estimate here also includes insects, other invertebrates and plants.



Recommendations: The United States should:

- Establish a federal Interagency Task Force on Conservation of Biological Diversity to develop a long-term U.S. strategy to maintain biological diversity.
- Increase U.S. support to ongoing international programs to set priorities for protecting biological diversity.
- Consider establishing an international fund to help developing countries protect and manage critical ecological reserves, especially in tropical forests.
- Increase support of national and international efforts to inventory the world's plants and animals and to collect species and germplasm.
- Increase training assistance for wildlife management and conservation professionals in developing countries, especially at selected institutions in those countries.
- Expand its ability to offer technical expertise in conservation of biological diversity.

Coastal and Marine Resources

Problem: Urban and industrial development leading to destruction of productive coastal wetlands and reefs; pollutants washed from the land, dumped or discharged in the ocean or deposited from the atmosphere; and exhaustion of world fisheries are growing threats to coastal and marine ecosystems. Fish harvesting—a major component of the world's food supply—has leveled off and by the year 2000, fish may be contributing less to the world's nutrition, on a per capita basis, than it is today. Adding to the concern is the lack of data regarding the degree of pollution and disturbance in the open oceans.

Recommendations: The United States should:

- Set up a U.S. technical conference to review and improve ecologically sound strategies for fishery management.
- Expand support of fishery management in developing countries bilaterally and through increased funding to FAO.
- Inventory and map coastal resources and assess the amount and the effects of major pollutants spilling into coastal and marine areas from land; cooperate with other countries to do the same.
- Increase efforts to establish marine sanctuaries and seek an international agreement on protection of habitats of migrating species.
- Support a moratorium on all commercial whaling until the continued survival of whales can be assured.
- Do the research needed to implement the Antarctic Living Resources Treaty; continue efforts to assure that Antarctic minerals will not be exploited until a decision has been made on the basis of sufficient information that such development is acceptable.

Water

Problem: The need for water will greatly increase over the next 20 years; in half the countries of the world population growth alone will cause demand to double. Information on water availability and quality is exceptionally poor, but it is clear that problems of water supply will be serious in many regions. Parts of the world, especially the Third World, already are suffering severe water shortages and drought, and water-borne disease is endemic. Unless a concerted effort is made to preserve water, reliable supplies will continue to disappear.

Recommendations: The United States should:

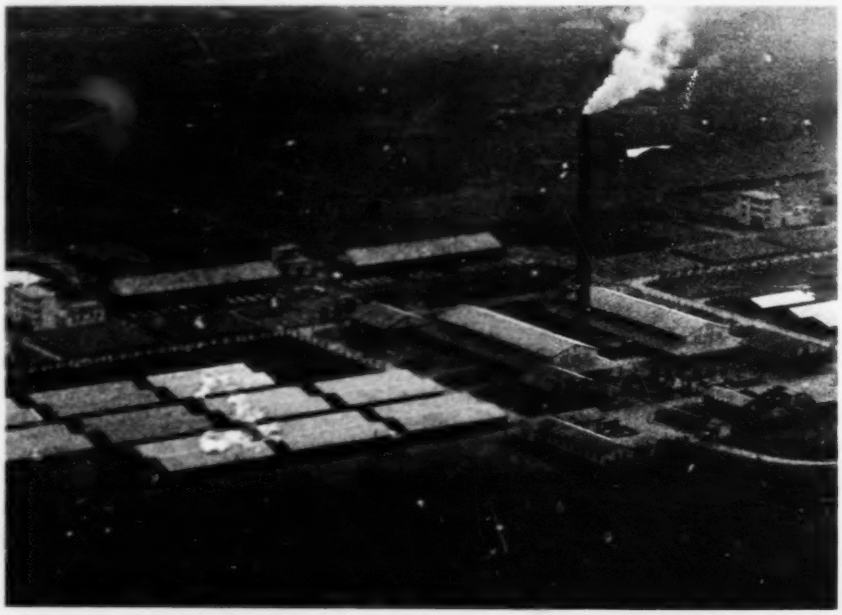
- Establish an Interagency Committee on Global Water Supply and Management to assess monitoring of the world's water, identify potential areas of conflict and propose ways for the United States to cooperate with other nations to share knowledge.
- Improve bilateral technical assistance in water management and increase financial support of FAO for training in water management.
- Increase research to reduce the need for water for irrigation.
- Take part in international efforts to assure safe drinking water as a major development goal.
- Encourage arrangements to anticipate and resolve international disputes over water.

Global Pollution

Problem: Certain by-products of economic development and industrial growth threaten the earth's life support systems. Hazardous substances, nuclear waste, the buildup of carbon dioxide in the air, damage to the stratospheric ozone layer, and acid rain all could harm virtually every aspect of the earth's ecosystems.

Recommendations: The United States should:

- Work toward improving international agreements to control hazardous substances and waste.
- Improve its system for notifying countries that hazardous substances banned for all or most uses in the United States are being exported to them, and, in cases of extremely hazardous substances, control their export.
- Improve its ability to handle hazardous wastes.
- Develop procedures for regulating the export of hazardous wastes.
- Take national and international measures to reduce amounts of nuclear waste and control their disposal.



- Protect against radioactive material.
- Analyze alternatives for the future with special emphasis on action to reduce carbon dioxide buildup.
- Support further research on acid rain, continue work with Canada on air pollution, and intensify legal efforts to control acid emissions.
- Support more research on ozone depletion and encourage action by international organizations to protect the stratospheric ozone layer.
- Improve national and international climate programs.

Sustainable Development

Problem: Many of the world's most severe environmental problems are in part a consequence of extreme poverty: deprived people are forced to undermine the productivity of the land on which they live. They plant crops on poor soil, graze stock on marginal land, causing it to turn to desert, cut trees that are needed to stabilize the soil and the water supply, and burn dung needed to fertilize and condition agricultural soil.

Recommendations. The United States should:

- Make up its overdue obligations to the World Bank and other development funds and contribute its share to the World Bank's general capital increase.
- Expand its development assistance targeted to food, energy, population and health, and coordinate it with programs of other countries and international organizations.
- Urge the World Bank and other international organizations to integrate resource and environmental considerations more fully into their planning.
- Increase resource management expertise in AID programs and encourage all U.S. agencies with significant activity abroad to further integrate resource and environmental considerations into their decisions.
- Develop ways to use the scientific, technical, resource management and environmental expertise of U.S. government agencies more effectively both in AID programs and in other international cooperation programs.

Institutional Changes: Improving Our National Capacity to Respond

Problem: The U.S. government currently cannot adequately (1) project and evaluate future trends; (2) take global population, resource, and environmental considerations into account in its programs and decisions; and (3) work with other countries to develop international solutions to these problems.

Recommendations: The United States should:

- Establish a government center to coordinate data collection. This will ensure that policy analysis on long-term global population, resource, and environment issues will rest upon sufficient information.
- Improve the quality of data collection and modeling for global issues and promote wider access to data and models.
- Establish a federal coordinating unit, preferably in the Executive Office of the President, to develop federal policy and coordinate ongoing federal programs concerning global population, resource, and environment issues. Activities should include coordinating data and modeling described above; issuing biennial reports; assessing global population, resource, and environment problems; and serving as a focal point for development of policy on long-term global issues.
- Adopt devices that force action, such as budget review procedures, a presidential message, a blue-ribbon commission, offices in each federal agency to deal with long-term global issues, or legislation ordering federal agencies to address long-term global issues, a federal coordinating unit, and a public-private institute.
- Create a public-private Global Population, Resources and Environment Analysis Institute to strengthen and supplement federal government efforts on long-term global analysis.
- Improve the budget process to make technical expertise of U.S. agencies more readily available to other countries.
- Assure environmental review of major U.S. government actions that significantly affect natural or ecological resources of worldwide importance; designate tropical forests, croplands, and coastal wetland-estuarine and reef ecosystems as globally important resources.
- Continue to raise world population, resource, and environment issues in appropriate international forums; work with and support appropriate international organizations and other countries in formulating solutions.
- Enlist business in formulating responses to long-term global problems.
- Increase public awareness of global population, resource, and environment issues.

Global Future: Time to Act calls both for fresh starts and for continuing efforts. It emphasizes our special strengths—especially scientific and technical—and it looks to others for leadership in *their* areas of special strength. The report stresses that international cooperation is imperative in maintaining a productive and habitable earth. No one nation can tackle the problems alone.

In general, the recommendations in the report are the first steps in what needs to be done, efforts that must be duplicated, enhanced, repeated, and expanded upon many times over by other nations and international organizations, by private institutions, by business, and by industries. A guiding hand at the center of the U.S. government's share of the response is critical—not only for coordination but for staying power.

Copies of Global Future: Time to Act *are available from the Council on Environmental Quality, 722 Jackson Place NW, Washington, DC, 20006. Please enclose a self-addressed mailing label.* □

REBUILDING, REPLANTING, STARTING OVER

Lebanese restore farms torn apart by war.

by Betty Woodward

You could see it coming.

Two cars, racing down a highway in southern Lebanon, both hugging the center line, neither willing to give way.

A witness to the crash, a field coordinator for Save the Children, a private voluntary agency, rushed to pull one of the injured drivers out from behind the wheel. "Don't move him," another shouted. "Wait for an ambulance, for God's sake."

The words hung in the air before the desert imposed its harsh reality. Here, there would be no ambulance.

This lack of medical assistance is just one example of the disruption that exists today in Lebanon. The continuing civil strife that has engulfed this country since the outbreak of civil war in 1975 affects virtually every aspect of life. With $6 billion estimated in property damage alone, it could be no other way.

Perhaps the most devastated area is southern Lebanon, where the thousands of villages and homes have been destroyed. The number of people displaced stands at over 200,000; most are children. Familes once living in harmony are scattered throughout the country. Whole villages have been wiped out, crops and livestock have been destroyed and water supplies cut. The vast majority of the population—small farmers totally dependent on agriculture for subsistence—is left without any source of income.

But within this seemingly hopeless situation, there is some reason for optimism. Through a grant from AID, Save the Children, is working with the government of Lebanon to help farmers rebuild their lives.

It's not an easy task. Save the Children has focused on a target group with immense problems and few if any resources. War has wiped out small farms; small farmers cannot qualify for loans with which to start over.

Through a supervised rural credit program, serviced by Save the Children field coordinators and technical assistants, the farmers are beginning again. Venture capital has begun to flow into these ravaged areas, allowing the villagers to remain on their land. Many who fled during the fighting have returned home.

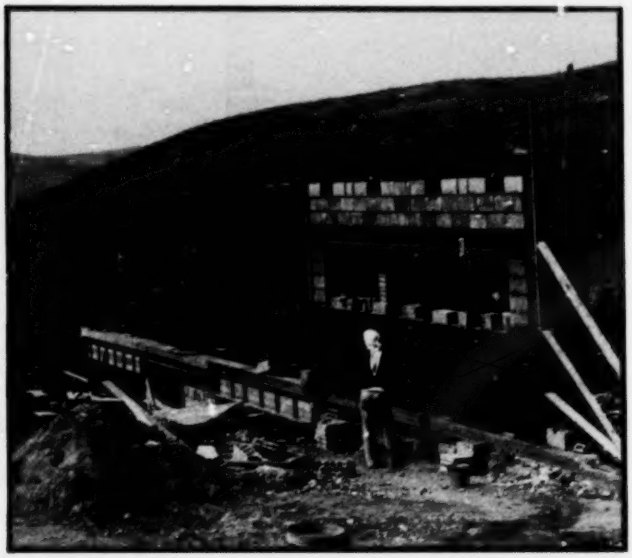
A typical beneficiary of the credit program is a full-time farmer who works a few hectares of land (1 hectare equals about 2.5 acres). He receives a grant of approximately $2,200 either in cash or in-kind, seed, for instance. The loan interest rate is low—only 4% for a short-term loan of one year or less and 5% for two to five years. The program buys items such as fertilizer, sprayers and other supplies in bulk, and resells to the farmer at lower than market prices.

The farmer's loan application is processed quickly. This is essential; his needs are critical. In most cases, a check—or the in-kind item—is delivered within 120 days.

Farmers are encouraged to use their loans for things that will generate income rapidly and are easy to keep: bees, saplings or sheep, for example.

Perhaps the most important part of the whole program is the technical assistance that accompanies the loan. With AID funds, Save the Children has hired agronomists to advise the farmers. Thus, a farmer planning an olive grove first learns proper irrigation, spraying, fertilizing, pruning and harvesting to ensure a successful crop. In the town of Sufa, which was deserted in 1978 during the Israeli incursions, olive saplings are now taking root. Forty-seven individual loans have been made in this small town, and now the villagers are negotiating for a community loan—for an olive press.

In addition, informal training sessions focusing on specific agricultural techniques are held in villages.



Pest control, plant disease, maintaining livestock and identifying nutritional deficiencies are just some of the topics discussed.

As one of the by-products of the Agricultural Rehabilitation Program (ARP), field coordinators have encouraged villagers to seek help from other agencies for problems not directly related to farming. For example, the town of Ghandouriyye was leveled in 1978. Machine gun rivets mark anything left standing. There are still craters where bombs hit. With the help of the field coordinators, the farmers have applied to the Council for Reconstruction and Development for housing loans.

Save the Children has been able to provide a wide range of complimentary project activities as well. Community-based primary health care centers have been established in Ghandouriyye and other areas. The Save the Children health and nutrition coordinator out of Beirut is working with locally-based women to improve immunization coverage, nutrition care and family planning. A series of job-related training activities has been organized in several villages where ARP loans have been given.

In the town of Hebbariyye, the first solar-heated school in Lebanon is being built with an AID matching grant, contributions from Save the Children and support from the Lebanese government. This school, which will house the 400 children currently squeezed into a private home and part of the village office building, will serve as a model for other solar construction in Lebanon.

One prerequisite for village selection for the Agricultural Rehabilitation Program is the formation of a community committee. The local committee manages the loans, selects any community projects that would require a community loan and decides who is eligible for individual loans.

Collecting loan payments is another crucial task of the committee. This would seem to be on paper a most difficult task. No security or mortgage is asked; just a promissory note is used. The recipients are usually small farmers who have suffered tremendous losses and live in areas where legal procedures for collection are useless. Yet the repayment rate is remarkably high. In most villages, it runs 95% or more on the due date.

This impressive repayment record attests to the success of the program, for without generated income, the farmers could not repay the loans. Often the loans are immediately recycled for additional village use. Over 1,139 individual and nine community loans have been made, with a total of over 35,000 Lebanese benefiting from the program.

The selection of villages and the overall allocation of funds is handled through a joint commission composed of Dr. Karam from Save the Children, the director general of the General Directorate of Cooperatives and the vice-president of the Union National de Credit Cooperatif. While the bulk of support comes from AID, other contributors include the United Nations High Commission for Refugees, the Lebanese government and Save the Children partners in Austria, Canada, Denmark and Norway.

While the ARP program is benefiting thousands of poor rural Lebanese, many more still need assistance desperately. The Save the Children field office in Beirut hopes eventually to expand the program to help small businessmen affected by the prolonged conflict. Meanwhile, ARP remains the only successful, small farmer production credit program in the entire country. It also is one of the few non-political, socially beneficial activities reaching out to help the victims of war.

Betty Woodward is public relations administrator for Save the Children.

by Michael Greene

A major oil spill could cripple struggling economies.

Hidden Hazard In the Caribbean

Throughout history, hurricanes, earthquakes, volcanoes and floods have tormented mankind. During the past 10 or 12 years, a new disaster has come on the scene: the oil spill. While not the killer that the others often are, the spill can take a heavy toll nonetheless. In spewing thousands of tons of oil into the sea, it can kill wildlife, destroy natural resources, and critically wound a local economy.

The risk of an oil spill is highest where petroleum production and transport is highest—the Persian/Arabian Gulf, the Mediterranean, and the North Sea. Many of the countries in these areas have recognized the risk and, with help from the United Nations Environment Program (UNEP) and Intergovernmental Maritime Consultative Organization (IMCO), have made regional cooperative arrangements for preventing and controlling spills. Regional Oil Spill Combating Centers have been set up on Malta for the Mediterranean and in Kuwait for the Gulf. Another is planned for South Asia.

The Caribbean is another matter. Petroleum production and transport is increasing rapidly in the Caribbean, and with it the risk of a serious spill. Unlike most of the countries bordering the Gulf, the Mediterranean and the North Sea, the Caribbean states are mostly small, poor and dependent on tourism and fisheries for their economic survival. Their coastlines contain mangrove swamps, coral reefs and other ecological systems highly vulnerable to oil pollution.

And almost without exception, they are unprepared to cope with an oil spill disaster.

To date, there has not been a major oil spill in the eastern Caribbean, where most of the poorest countries are. But the risk increases with each tanker that passes. According to a study recently done by Texas A&M University for the UNEP, 4,700,000 barrels a day, or 250 million tons a year, of crude oil is shipped to or through the Caribbean, including the eastern Caribbean. Half of this is shipped in super-tankers averaging 200,000 tons. The other half travels in midsized ships averaging 60,000 tons. In 1978, 12 spills were reported in the Wider Caribbean region. Extrapolation from experience in other parts of the world, in terms of numbers of spills per volume of oil transported, offers this prediction: 21 spills per year averaging 1,000 metric tons within 50 miles of land. Moreover, says the U.S. Coast Guard, because of ocean currents, a major spill in the heavily traveled tanker lanes of the eastern Caribbean would affect several islands within a few days.

What could happen if a supertanker split open in Caribbean waters? An island's entire coastline could be coated, tourist beaches marred, birds, fish and natural areas destroyed. If no cleanup measures were taken, affected beaches could remain unusable for several years. If cleanup were mishandled, for example if too much beach sand were removed in the process of getting rid of the oily sand, it's very likely that what beach was left would wash away.

In addition to the damage to wildlife—particularly to seabirds, fish larvae and shellfish—mangrove areas, a source of life, could either be wiped out or so severely damaged that it would take five to 10 years to restore them. Although submerged coral reefs, so important to the balance of life in the sea, are not necessarily hurt directly by an oil spill, chemicals used to disperse the spill can kill coral. And after the spill? The reputation of an island as one with "dirty beaches" could last, with disastrous economic effects.

What of the economic impact of a major spill on small island nations already in economic distress? The costs of cleanup, of course, vary with the amount of oil spilled, the type of coastline involved and the cleaning method used. In 1968, for example, the Ocean Eagle broke in two in San Juan Harbor, Puerto Rico, dumping 45,000 tons of crude oil; the cost was $500,000 for beach cleanup and $2 million for salvage. In 1981, the cost for the same accident would be up to $5 million, just for cleanup. Last year, the Tanio spilled 60,000 tons of oil on the French coastline. The cleanup cost: $40 million.

Damage costs are even harder to estimate than cleanup costs. Compensation by the oil companies depends in part on the laws of the island affected. The tourist industry in many of the Caribbean islands is worth around $100 million a year. The hotel whose beach has been damaged and which loses clientele as a result probably has recourse in the courts. But other hotels—on other coasts of the same island, for example, probably will lose business, too, in the wake of bad publicity. Their case will be harder to prove.

The most difficult claims to adjudicate relate to environmental damage. After a series of accidents, Puerto Rico sued the oil companies involved for compensation for the loss of each dead mangrove tree, all sediments and soils that had to be replaced, and every marine organism —at 6 cents per organism. But the oil companies replied that the only measurable loss is the decline in commercial real estate value; mangrove swamps are not commercial real estate. The case is still in court.

To their credit, petroleum industry representatives are generally quick to respond to a spill. Where the liability of a tanker owner is clear, the industry will mobilize resources and initiate cleanup, even take charge of the operation when no one else can. It realizes that prompt action is necessary to minimize damage for which it will be held accountable, and it can be relied upon to take effective action, bringing in its own resources where necessary. A consortium of oil companies operating in the Caribbean, called the Clean Caribbean Cooperative, has leased oil spill combating equipment in Boston. This equipment can be flown to a spill at the request of a member of the consortium. A limited amount of equipment available at oil company installations within the region also can be brought into play.

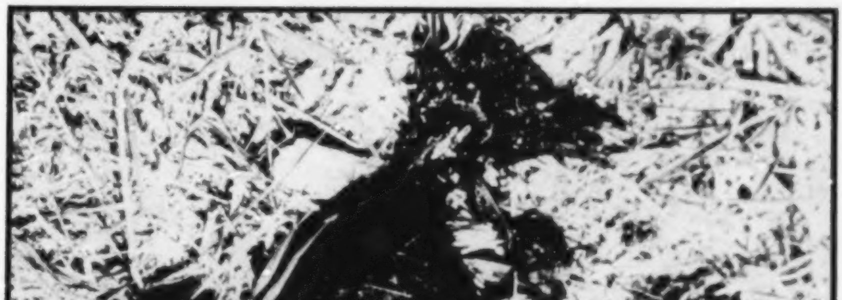
On the other hand, it is not to disparage the dedicated and extremely able cleanup experts to point out that their primary responsibility is to their employers, that is, to minimize liability and to limit cleanup costs. Their judgments may not always coincide with the best long term interests of the affected island. A possible example again is the use of dispersant chemicals. Where they are effective, they are applied by boat or plane to a floating slick and cause it to break up and disappear from view. However, their effect on marine organisms, such as coral reefs, is at best controversial, and in some instances the oil may simply form clumps that submerge and continue their advance to the beach. In such an event, they can no longer be easily identified with the oil spill or with the liable tanker owner or oil company.

It is clear that the danger is real Caribbean countries have no real defense. A dual strategy is needed: national contingency plans and a regional program for cooperation and technical assistance.

The government of a nation hit by a spill has many decisions to make. Some of these decisions can be made in advance, and that is what is meant by contingency planning. As part of national planning, an Oil Spill Coordinator or On-Scene Commander (OSC) should be appointed and his or her training made a high priority of each state and territory of the Caribbean. However, to date only a handful of islands have even considered the question.

Other elements of national contingency planning are strategies and assignment of responsibilities for protecting sensitive areas, beach cleanup, disposal of oil, public relations, inventory of available equipment, negotiation with sources of assistance, and financial arrangements for cleanup. Providing money for cleanup is particularly important when it's not possible to pinpoint the source of the spill, or a company refuses responsibility, or settlement is delayed for any reason. Oil cleanup contractors, and even the U.S. Coast Guard, require payment "up front" before they will begin.

Generally it is not necessary for a territory to acquire expensive equipment; it is more important to know in advance where such equipment is available and under what conditions. Even so, some equipment must be on hand: booms (barriers) to protect vital areas, absorbants and shovels and bulldozers, for example. It may be necessary to create stockpiles around the island. Such equipment is needed immediately in the event of a spill and is hard to import at short notice. Training and practice in using this equipment, particularly in laying booms from small boats, should be a part of the planning.



A victim of an oil spill

Regional arrangements and a regional plan can help take the burden off individual islands. Large oil spills are often discovered in international waters and must be tracked and monitored to determine points of impact. Since a large spill in the Caribbean is likely to affect more than one island, cleanup activities would have to be coordinated.

Under regional arrangements a spill would be monitored and islands in its path alerted; equipment and personnel readied; and cleanup activities and legal actions coordinated. A regional program would also provide for an up-to-date inventory of equipment and expertise, ongoing training courses for OSCs and their staffs, and for help with national contingency plans. Under the regional plan experts would advise governments on appropriate standards, legislation and international conventions. The regional program would also provide a forum for broadening areas of agreement and for maintaining liaison with the petroleum industry and with the international organizations active in the region.

In the past two years there has been some progress.

In early 1979, the Organization of American States sent a consultant to assess the state of oil spill preparedness of the six island states then members of that organization: Barbados, Dominican Republic, Grenada, Haiti, Jamaica, and Trinidad and Tobago. His report was discouraging; there had been nearly no preparation for an oil spill emergency. The only country with an oil spill contingency plan in effect was Trinidad and Tobago, an oil exporter.

This report was presented to a special OAS task force assigned to come up with an emergency plan. At a meeting in Port of Spain in May 1979, the task force, including a representative from each country, plus experts from UNEP, IMCO, the U.S. Coast Guard, the U.S. Environmental Protection Agency, the OAS Secretariat, and other private and international organizations, quickly agreed that regional action was urgently needed. It produced a "Framework of a Regional Oil Spill Control Plan."

Then, OAS joined forces with the U.S. National Committee for Man and the Biosphere (USMAB), and approached the U.S. Agency for International Development and UNEP for support. The response came quickly. Both AID and the United Nations provided funds to incorporate regional oil spill contingency planning into UNEP's Environmental Action Plan for the Wider Caribbean Region. IMCO offered to fully sponsor the activities and provide an expert.

The result was a program for concerted action. First, the smaller Caribbean islands were integrated into the process. A Joint OAS/IMCO fact-finding mission was dispatched to these islands, and again the report was discouraging.

A workshop on oil spills for the smaller Caribbean islands was held in Puerto Rico in June, 1980. Participants were treated to a simulated spill and demonstration of oil spill technologies arranged by the U.S. Coast Guard and a local contractor. The smaller islands' representatives sat down and produced a revised version of the OAS "Framework," to reflect their own interests and their differences.

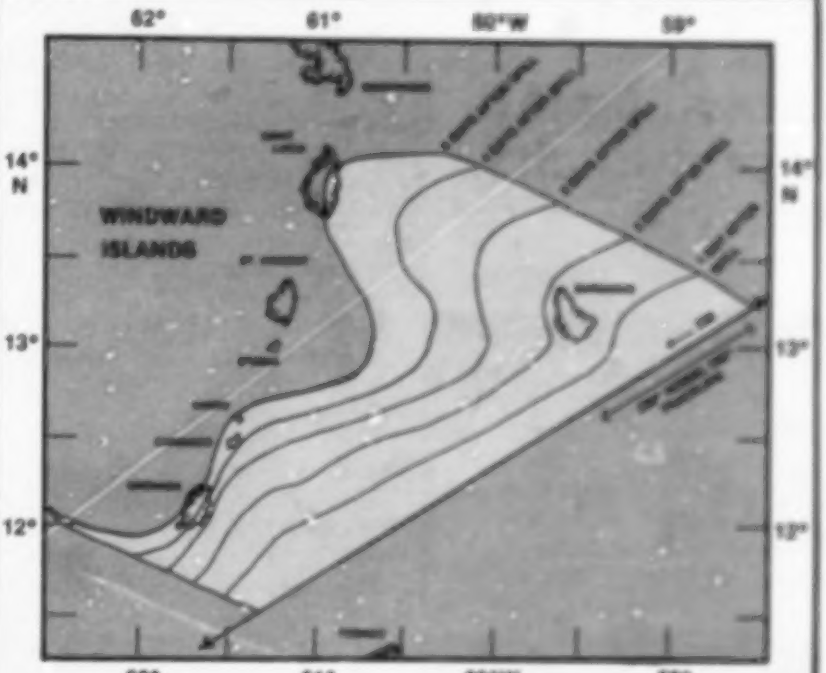
The region then had two distinct "Frameworks" for a regional plan. However, at a meeting in Barbados in November 1980, all the island governments agreed to a regional plan to which all could subscribe and to discuss steps for implementation. It was agreed that a small technical unit of perhaps two professionals would be required and that it should be housed within an existing international organization or government of the region. There was a general feeling that the governments themselves should have a strong input into the management of the unit. The formula accepted provided for a regional council, composed of the oil spill coordinators of each territory, to approve the activities of the unit.

But the meeting has ended, and despite a promising start, at this writing no more than two Caribbean islands, apart from the U.S. and French territories, have operational oil spill contingency plans. Only one, in addition to the British dependencies, has subscribed to the International Oil Pollution Compensation Fund Convention, which establishes the right to up to $60 million in compensation.

So what has been accomplished? The Regional Plan exists, created by experts from each of the island territories, but it needs an intergovernmental agreement to go into effect. That remains to be done.

One thing is certain: a major oil spill could happen at any moment—and it could spell disaster for more than one small, struggling nation. ☐

Michael Greene, formerly deputy director of the Department of Science and Technology of the OAS, is a freelance consultant.



The spill shown here is hypothetical—the result of a collision to the east of the windward islands. About 22,000 tons of #6 fuel oil were thrown onto the sea. A trackline of a vessel leaving the Caribbean between the islands of Grenada and Tobago was used as a starting point. Within 5 days Grenada and several of the smaller Grenadine Islands, Barbados, and St. Lucia are victims. This prediction was determined using average sea currents and wind conditions, and does *not* present a worst case analysis. (Courtesy of the U.S. Coast Guard)

ARE MEN THE FORGOTTEN PARTNER IN FAMILY PLANNING?

Yes, according to a Worldwatch study.

Cyclists in Pakistan can't miss this billboard's message: family planning is important.

Men are the "forgotten sexual partner" in family planning efforts, says a study released recently by the Worldwatch Institute, an independent, nonprofit research organization in Washington. "Nearly a half billion men have little or no access to birth control services and few contraceptive options. Yet, by ignoring the interest men have in planning their families, society ends up perpetuating sexual stereotypes and hindering efforts to slow world population growth."

Men and women can, however, share more of the responsibility for family planning, says Bruce Stokes, author of the paper, "Men and Family Planning." New research reveals that men have much more interest in contraception—and a willingness to practice it—than they have been given credit for. A male contraceptive pill may be available before the end of the century, and recent experience suggests that family planning programs aimed especially at men can increase condom use and reliance on vasectomy.

"Men's involvement with birth control is initially constrained by human biology," Stokes observes. "It is women, not men, who get pregnant, and women's fertility may be easier to control than men's. But these practical constraints do not explain the limited and often negative role many men play in family planning."

In fact, recent studies of American men indicate that they overwhelmingly favor family planning and think that men and women should share responsibility for using it. A survey of Mexican men found they believed in limiting the number of their children, and the initial results of World Health Organization research in five Third World countries showed that men in a variety of social and cultural settings had a degree of interest in family planning that belies their poor reputation.

"This contradiction between many men's attitudes and their behavior can be explained in part by the fact that few societies expect men to use contraception or hold them fully accountable for the children they father," the author says. "Moreover, many men fear that freeing women from repeated childbearing will diminish the man's traditionally dominant role in the family. Poverty can reinforce these beliefs. In most countries, men with low incomes are less supportive of family planning than are middle- or upper-class men."

Despite some men's poor family planning record, male contraceptive methods are anything but obsolete. Until two decades ago, most couples practicing family planning used male contraceptive methods. Of the more than 250 million people in the world currently using contraception, one-third rely on male methods. The study also reports that most of the people who rely on male contraception live in industrial countries.

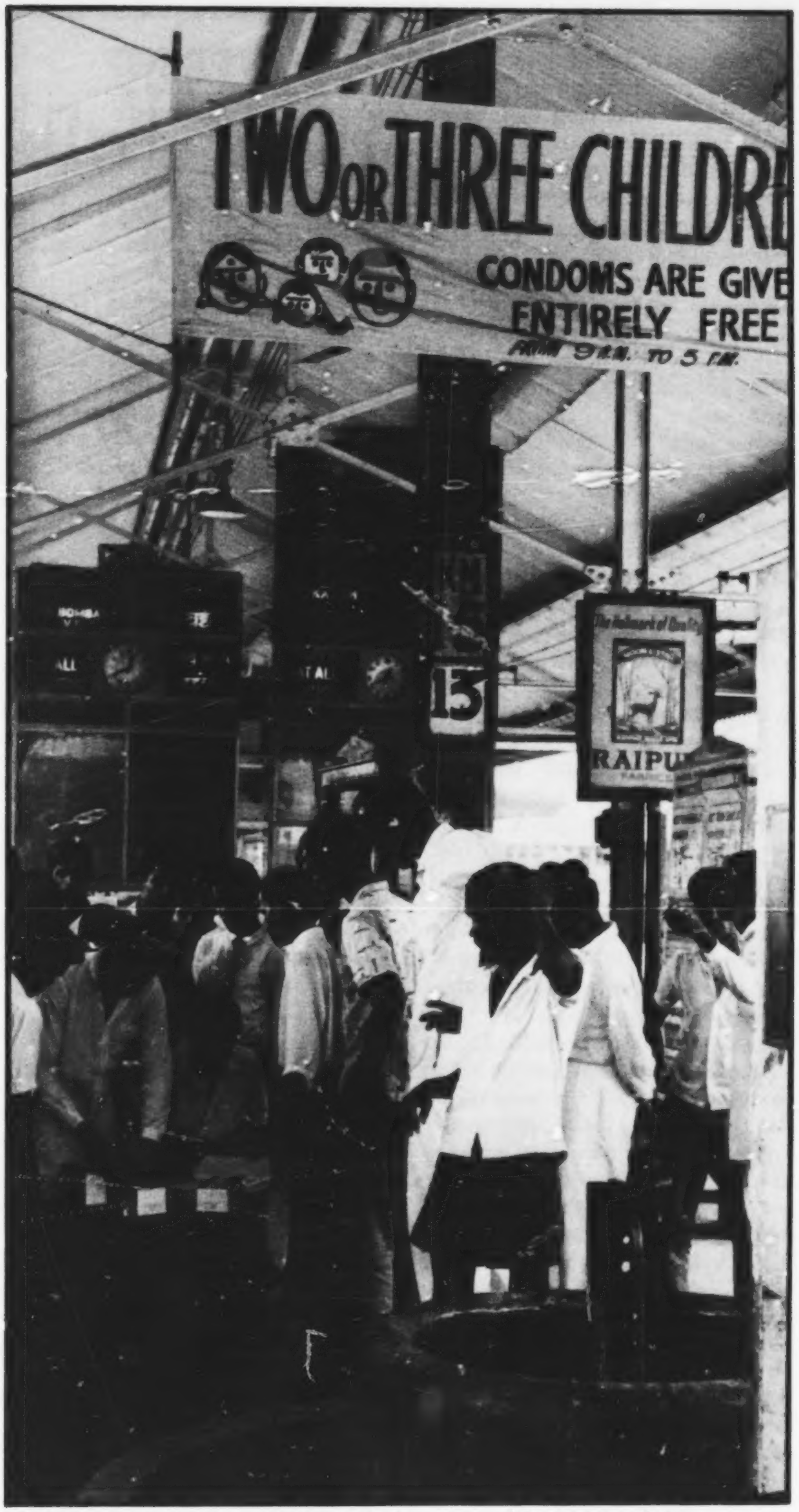
"The number of couples using a male method of birth control is likely to increase in the years ahead," says Stokes, "and male sterilizations are becoming more popular in Great Britain, China and India. In addition, the development of a male pill could increase men's use of birth control dramatically." Clinical tests on such a pill have only begun, however, and until they are completed prospects for a male pill remain uncertain. Promising early results suggest it may be possible to halt the production of sperm without the health problems associated with the female pill and without changing male sexual characteristics. It is technically feasible that a male pill will be available within two decades.

A few organized programs are reaching out to men. In the early 70s, for example, nearly half the clients or mobile family planning teams in the Danfa region of Ghana were men. In this male-oriented society, men turned out to be much more conscientious contraceptive users than women and better family planning advocates in their community. One evaluation of the program suggests that at least half the fertility reduction in Danfa was related to male acceptance of contraception.

"If men are to play a more responsible role in family planning, they need society's support and encouragement," Stokes says. He notes that only $155 million was spent worldwide on all male and female reproductive and contraceptive research in 1979.

"New male responsibility for family planning promises payoffs for both society and the individual," Stokes adds. "Studies in India and the Philippines suggest each vasectomy averts between two and three accidental births. Condom use may be the only effective means of halting the spread of venereal disease in the United States. And, by using contraception, men can share with women the burdens associated with almost any form of birth control."

He predicts that the changing patterns of contraceptive use, new male technologies and programs and growing understanding of men's interest "will create not only a new role for men in family planning, but also a new role for men in the family and in society. ☐



Family planning in India is convincing men to share responsibility for having babies.

IN PRINT

Plain Talk

A review by Edward R. Caplan

Ever since Rudolf Flesch wrote "The Art of Plain Talk" 35 years ago, a few good men and women have been trying—against the onslaught of economists, educators, lawyers, social workers and MBAs—to promote the use of clear, crisp, simple English.

Alas, it sometime seems to be a losing battle. The obfuscators, "affixionados," Latinizers and sentence convoluters never give up in their quest to muck up a perfectly fine language.

One inevitable result of muddy language is suspicion on the part of the reader—suspicion that the writer doesn't know what he or she is talking about. Worse, especially when the murkiness comes from the government, is the suspicion that the writer is trying to hide something sinister. Allaying these suspicions should be reason enough for clarity in the written word.

Now David Jarmul, chief editor for Volunteers in Technical Assistance (VITA), has an even more pressing rationale in his new VITA publication, "Plain Talk: Clear Communication for International Development": "Writing for development projects should be as easy to understand as possible. After all, it is hard enough to understand a new concept, or how a strange machine works. Why complicate things with difficult language? People in rural areas rarely have much formal education. They don't understand fancy phrases, and neither do some extension workers. The problem is even worse for people who read English as a second language. Hard language blocks their way to new machines and ideas."

Jarmul attacks what he calls "fat writing." Indeed, most writing on international development is just that. Every "ameliorate" or "prioritize" is another blob of cholesterol clogging the arteries of communication.

PLAIN TALK: Clear Communication for International Development, David Jarmul, Volunteers in Technical Assistance, ISBN 0-86619-131-3, Mt. Rainier, Md., 1981. Paperback. 76 pages. $4.95.

The paperback book outlines a system it calls "VITA Simple English." I don't know why VITA feels it owns the system, or even originated it. Flesch, Strunk and White, and many, many others both before and after them have fostered the same principles: avoid jargon and difficult words, use active rather than passive verbs, avoid long and complicated sentences, use parallel constructions, and the like.

I wonder, too, why Jarmul includes a long chapter on the Gunning Fog Index. This is a complicated formula that determines the amount of formal education you need to understand a piece of writing. Valuable as the index is in some instances, it has several problems when applied to international development. It's geared to U.S. education levels, which don't mean much in developing countries. The computation is complex. The rules for counting hard words are a little confusing.

To the author's credit, he warns that readability formulas—even the Fog index—have their flaws: "They cannot measure grammar, clarity, organization, accuracy, interest, or the beauty of a phrase." In essence, Jarmul says readability formulas can tell you how bad your writing is, but not how good.

On the whole, "Plain Talk" contains a lot of valuable stuff, especially for anyone who has never been introduced to clear, simple writing. It carries on the tradition of such books by including a glossary of jargon—the words and phrases to avoid in favor of plainer equivalents. Thank you, David Jarmul, for listing "commence," "critical mass," "parameter," "replicate" and "terminate."

It's a pity, though, that there's no mention of the abominable affix—those syllables, usually Greek or Latin, tacked onto the beginning and end of words for the seeming purpose of making them incomprehensible. *Non*, for example. *Non* is really nothing, but in much bureaucratese has become a substitute for *un*, *in* or *not*. In real-world English, the opposite of formal is *informal*. In developmentese, it's *nonformal*. In AID, I've heard *nonconcur* used for disagree—and recently, when I selected a candidate for a job, the personnel office said I was *nonselecting* the other candidates.

David Jarmul, I welcome you to the good fight. ☐

Edward R. Caplan is chief of AID's press and publications division.

WHAT THE MEDIA SAY...

Insurrectionist movements in Central America are not inspired—merely exploited—by Cuba or the Soviet Union. Their real cause is the gap between the poor masses and the wealthy few who control those countries. Any U.S. policy that is not structured to deal with this reality as a first priority raises the danger of spreading violence and anti-American feelings.

—Baltimore Sun

One of those "few key countries" that deserves U.S. foreign aid is the Caribbean nation of Jamaica. It was symbolic that Prime Minister Seaga was the first foreign head of government to visit the Reagan White House. It's encouraging to see President Reagan . . . hosting one who promises to be a friend to our country, rather than a radical who takes our money while attacking our interests.

—News-Free Press
Chattanooga, TN

After years of taking Latin America for granted, the United States is finding that much of the region no longer shares its view of the world or yearns for a return to the days of American domination. The loud cheers with which the region's military regimes welcomed Mr. Reagan's victory last November echoed deep hostility toward the Carter Administration. Yet, in the main, they were toasting an end to United States intervention rather than submitting themselves to Mr. Reagan's leadership.

—Alan Riding
New York Times

For many years a series of presidents and Congresses increasingly approved the spending of billions and billions of U.S. dollars by international banks and organizations in ways that have been of little or no value to American interests. On many occasions these vast foreign aid handouts actually are used against U.S. interests.

It makes no sense for our government to be borrowing money at interest rates of 15% and more so that it can be given away or lent by an international bank at a small fraction of this amount to a country that couldn't care less where the money came from.

—Globe-Democrat
St. Louis

When Israelis worry about their future, which is most of the time, they usually think about their many enemies. . . . But the greatest threat to Israel's security may not be outside the country . . . it may come from inside Israel, from the staggering profligacy of a nation that is letting its economy fall to pieces . . . the Israeli economic bubble keeps expanding, fed by government printing presses and a citizenry that is heedless of its peril. When the bubble bursts, as it must, the shock will be as great as any terrorist attack or Arab jihad (holy war).

—James Jackson
Chicago Tribune

It is in America's self-interest to reduce the dependency of poor nations on our food. This would help stabilize income and jobs in U.S. agriculture which, ultimately, would strengthen our clout. Our objective should be to help poor nations to become more self-sufficient in food, and emphasize the long-term reliability of U.S. food exports on a commercial basis.

—Richard Drobnick
Washington Star

In the courting of an important Third World nation, we generally have the same array of inducements that is available to the Soviet Union. We can sell arms, and the Soviets can sell arms. We can use military might, and the Soviets can use military might. We can make threats, and the Soviets can make threats. But we have one very important weapon at our disposal that the Soviets can not even begin to approach —our economy.

Our foreign aid programs supply food for Third World nations unable to provide for themselves. It gives us an important lever to influence governments on decisions affecting U.S. interests. Through programs like the Peace Corps, we can export American knowledge and expertise to nations in need.

In other words, through foreign aid we show the world that while we can be formidable enemy, we can also be a very helpful friend.

That's what makes us different.

—Review-Journal
Las Vegas

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MAY 1981

AID: PART OF THE INTERNATIONAL CHALLENGE

S18.34/2

DEVELOPMENT UPDATE

One Man's Opinion: "My friend Hofmeyr used to farm up in Thompson's Falls in Kenya," writes the editor of the *World Aid Digest.* "When his farm was bought for resettlement five years ago he retired." But no lazy man, Hofmeyr. He returned to the bush where a local chief suggested he might plow the fields for a fee. He organized the transportation to market of mangoes that otherwise would have rotted on the ground, and with the encouragement of a tribal chief, started growing and shipping pineapples to market —incidentally involving the local people in his flourishing enterprises and demonstrating his techniques. "In the middle of the untouched, virgin bush he introduced a cash crop which benefits anybody within reach of the main station." There were no feasibility studies, reports the *Digest,* no appraisals, no technical assistance, no soft loans or grants, and no hassling between government and aid agency over how the scheme should be run. Concludes the *Digest:* "In most countries aid has played its role in preparing infrastructure . . . Hofmeyr's pineapples trundle hundreds of miles over aid-financed roads for delivery to an aid-financed airport. He buys aid-financed fertilizer . . . It could be said that more attention should be paid to farmers like Hofmeyr. Private initiative cannot build roads, but it can grow pineapples, while aid agencies can build roads, but they have yet to prove that they can grow pineapples."

The end of the Asian elephant? Possibly. According to the Asian Elephant Specialists' Group meeting in Sri Lanka, unless urgent conservation measures are taken, the Asian elephant may be no more. There are now 35,000 of them—15,000 in India and fewer than 250 in Bangladesh, where their survival is considered hopeless. The group identified projects to be carried out in the next two years with a World Wildlife Fund grant: an elephant management program in Burma; a habitat survey in Indonesia; a conservation program in Thailand; support for an elephant reserve project in India; and the relocation of nearly 800 elephants that will be displaced by a hydro-electric and irrigation project in Sri Lanka. Specialists agreed to work out a scheme of compensation to farmers whose crops are destroyed by elephants, so they will not kill the animals.

Eight years ago Costa Rica had to export 62 pounds of bananas for every barrel of oil it imported. Today it has to export 924 pounds of bananas per barrel of oil.

"To whom it may concern: Our company understands there are many business opportunities in developing countries. Could you provide further information?" This is an example of letters received recently by the Agency for International Development. At least in part they are the impetus for a study looking toward closer cooperation between the federal government and private business in the development of Third World countries. Raymond Malley, director of AID's Office of Business, says U.S. firms could play a much greater role in development than they have. "In both the developed and developing worlds, medium-sized and small companies have only scratched the surface of their potential to become involved in commerce and cooperation."

agenda
agency for international development

Cover: In the 1980s, the world is faced with increasingly complex challenges—food, water and energy shortages; economic crises; threats to peace and human survival. The United States is helping to meet those global challenges .This issue of "Agenda" is devoted to in-depth discussions of the U.S. development assistance program for the coming year.

Cover photo: United Nations

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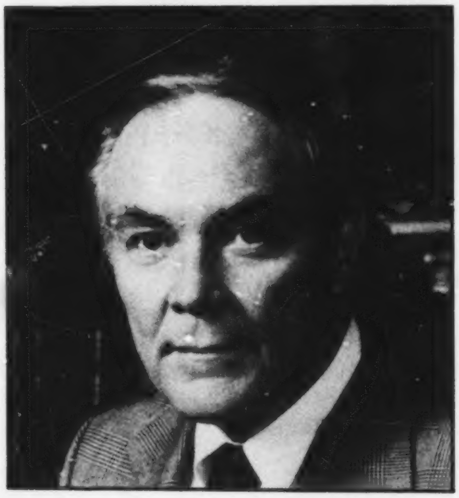
DEVELOPMENT ASSISTANCE: Part of the International Challenge

Foreign aid must address political, economic, security and humanitarian issues.

A statement by Secretary of State Alexander M. Haig, Jr.



The conduct of foreign policy and exercise of influence requires many tools. It is the role and purpose of one of these tools—security and development assistance—that is the subject for discussion today.

Security and development assistance should be seen in the context of the international challenges that confront us and the foreign policy we have devised to overcome them. Today's world presents the United States with three prominent trends. First, power is diffused widely among many nations and some are prepared to use violence to advance their ends. Second, we and our allies are now more vulnerable to international unrest and violent change. Third and most dangerous, the growth of Soviet military power is now capable of supporting an imperial foreign policy.

The last trend is most alarming. Soviet adventurism in the Horn, in South Asia, in the Persian Gulf and in Southwest Africa appears to conform to a basic and ominous objective: to strike at countries on or near the vital resource lines of the West.

The depressed world economic condition is equally familiar. The spiraling cost of oil has been a punishing blow to all nations. It has been particularly crippling to the developing nations. It is estimated that developing countries paid $50 to $60 billion in 1980 for their oil imports. Adding to this burden is another $50 to $60 billion in trade deficits. All of this comes at a time when world population will increase by half in just the next 20 years. . . . Economic dislocations of this magnitude create conditions for violent disruptions, with dangerous political consequences.

Our response to these challenges will require:

- A strong, prosperous and productive American economy, because we can do little to help others if we are disabled ourselves.
- An American defense posture that restores the confidence and determination of friends, and that deters adversaries from pursuing adventures.
- The resources to protect our in-

ternational security interests and to promote peace and prosperity abroad.

The President has proposed a far-reaching and dynamic program to restore the health of the American economy. I fully support his proposals.

The revised defense budget which the Congress will review in a short time is designed to revitalize our armed forces and rebuild our capacity to defend our vital interests. . . .

Before going into the details of the Administration's foreign assistance request, let me say a few words about the general directions of our economic policy and how we will shape assistance programs to complement these policies.

First, in the formulation of economic policy, in the allocation of our resources, in decisions on international economic issues, a major determinant will be the need to protect and advance our security.

Second, we shall continue to work with other countries to maintain an open international economic system. This will include efforts to engage the U.S. private sector more fully in the economic development process.

Third, the United States will not forsake its traditional assistance to the needy of this world: the undernourished, the sick, the displaced and homeless.

Fourth, there will be neither abrupt nor radical redirection of our international economic policies. Where necessary, policy will be changed in an evolutionary fashion, with minimal disruption and uncertainty.

Fifth, the United States will not abandon institutions and agreements devoted to global economic and political stability. The United States will continue to bear a fair share of the cost to maintain and operate international organizations.

Achieving these aims will require careful coordination and a varied assortment of foreign policy tools. Among the tools most important are our foreign aid programs—development and security assistance, contributions to the multilateral development banks and international organizations and the Food for Peace program. Together these programs can serve to meet the challenges of our adversaries and advance our interests and values.

Bolstering the defenses and economies of strategically important friends and allies requires that we strengthen our security assistance programs. This does not mean, however, that we attach less importance to our economic assistance programs. We do well to help developing nations overcome the barriers to sustained economic growth.

Sufficient funding and flexibility for our aid programs will not produce the results we seek unless these programs are carefully coordinated and skillfully executed. To these ends I

have asked (that) allocations of all types of foreign assistance in which the (State) Department is involved (be coordinated).

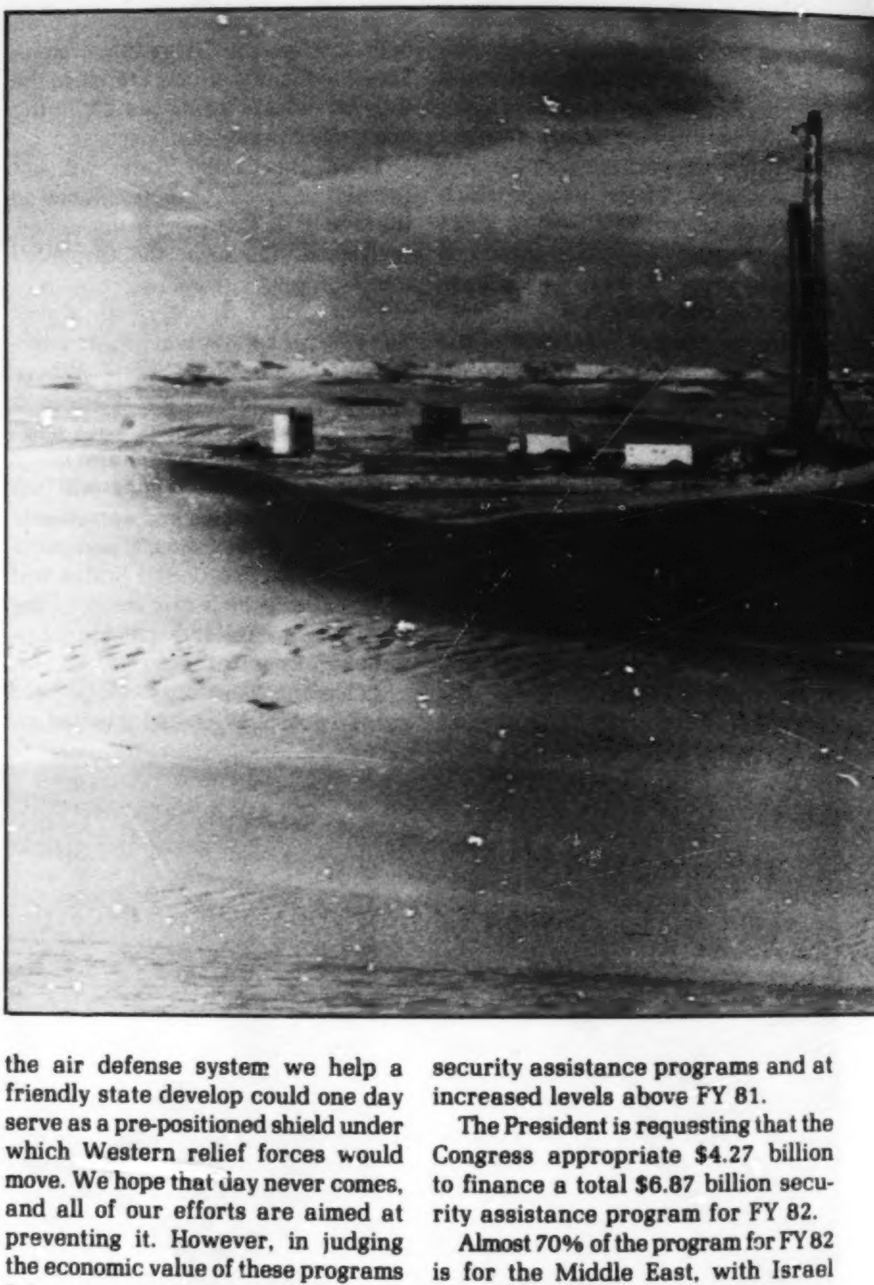
M. Peter McPherson, AID Administrator, will also report to me; there will not be a staff layer between us. He will be responsible for the overall budget and programs of economic development assistance and will deal accordingly with the Administration, Congress and the public. We shall consult with Congress in the months ahead as to how we propose to deal with the organization of the International Development Cooperation Agency. At this time, McPherson is both Administrator of AID and Acting Director of IDCA.

Security Assistance

I referred a moment ago to the President's proposals for reconstituting America's defense capabilities. Our security assistance program goes hand in hand with this effort and must enjoy equal priority. This is because the friendly states we support can themselves help us assure our most vital national interests.

For example, many of our security assistance partners enjoy a geographic proximity to the resources our economy demands. Others possess timely knowledge of complex regional events and are best suited to understand these events and assure that they do not slip beyond responsible control. Finally, many of our partners have military forces trained and experienced in operating in difficult areas.

As we strengthen these states, we strengthen ourselves and, for the reasons just mentioned, we do so more effectively and at less cost. Friendly states can help to deter threats before they escalate into world-shaking crises. The issue is not whether a local state can singlehandedly resist a Soviet assault. Rather, it is whether it can make that assault more costly, more complicated, and therefore potentially less likely to occur.



In practical terms, this means that the air defense system we help a friendly state develop could one day serve as a pre-positioned shield under which Western relief forces would move. We hope that day never comes, and all of our efforts are aimed at preventing it. However, in judging the economic value of these programs it is necessary to recognize the connection that frequently exists between today's assistance and tomorrow's needs.

In examining our overall security and defense needs, we have tried to balance the requirement for budgetary stringency with the need to revitalize our international position. From this review we concluded that our national interests demand a significant funding increase for our security assistance programs and at increased levels above FY 81.

The President is requesting that the Congress appropriate $4.27 billion to finance a total $6.87 billion security assistance program for FY 82.

Almost 70% of the program for FY 82 is for the Middle East, with Israel and Egypt as the largest recipients.

Let me say something about the importance of these two countries. . . .

Adequate defense capability for Israel, Egypt and other responsible Arab states will not only help deal with outside pressures, but will support our objective of a lasting Middle East peace. Individual and regional insecurity undermines every prospect for peace.

Our programs in the Middle East

and Persian Gulf area, working with such states as Oman, are designed to deter threats to both regional security and Western energy interests.

Our FMS (Foreign Military Sales) assistance to Europe will focus on four European nations: Greece, Portugal and Turkey in support of their NATO roles, and Spain in connection with our defense agreement and our use of Spanish bases. A sizable Economic Support Fund program is planned for Turkey as we continue to respond to that country's economic needs in cooperation with other donors.

Turkey and Greece are two of our most important allies. Greece and Turkey are important to each other's defense and as allies and friends both are indispensable to us.

In East Asia, Korea will receive a large amount of FMS financing for force modernization, with significant programs also scheduled for Indonesia, the Philippines and Thailand.

In Africa, our equipment, training, and/or economic support will help to enhance the security of a selected number of states friendly to the United States.

It is clearly in our interest, for example, to help Sudan and Tunisia withstand pressures from Libya. This is important in its own right and vital to our larger interest. For as the threat to these important states mounts, so too—indirectly—does the pressure on Egypt, with all that means for the prospects of peace and for our broader regional strategy. This suggests a central point: *The interrelationship between threats and events in different theaters.* If we are to act with coherence and consistency, these interrelationships must be reflected in our own policies.

For Central America, the Caribbean, and South America we are recommending a total program of $212.6 million. Especially noteworthy are our efforts to support the Duarte government in El Salvador, which we believe offers the best chance for a resolution of that country's conflicts.

This year we are also proposing that a portion of the foreign military sales program be available to selected countries as a direct U.S. credit at up to a 3% interest rate. This is necessary if our security assistance partners are to build their defenses and at the same time avoid amassing crippling debt burdens.

The benefits of our security assistance program will be limited unless we have the necessary flexibility to use these resources effectively and efficiently. This includes being responsive to unforeseen and rapidly changing events. It is impossible, in March 1981, to predict with certainty where crises may erupt in the coming months. We are therefore proposing special requirements funds for the Economic Support Fund and Military Assistance Program and a number of amendments to legislation that would facilitate the achievement of our policy objectives. If we have the capability to respond quickly and adequately in those cases where security assistance would make the difference, the need for United States involvement might be reduced or eliminated. . . .

Development Assistance

While security assistance is specifically designed to shape events and address short-term problems in countries and regions of major political importance to the United States, development assistance provides the United States with other opportunities to influence economic, social and political change abroad.

We remain committed to a strong

development assistance program as an integral element of our overall policy toward our international economic and security objectives.

U.S. foreign policy interests should guide our allocation of foreign aid. But the humanitarian aspects of the development assistance program should not be overlooked. As a cooperative partner helping to meet the needs of the developing countries, we will contribute to the achievement of a variety of key U.S. foreign and economic policy goals.

In our budget submission to Congress, a $1.9 billion AID appropriation is requested.

Over 50% of the proposed development assistance program will be used to alleviate malnutrition and hunger.

Multilateral Development Banks (MDBs)

Over the past two decades, a growing percentage of U.S. official aid has gone to support multilateral development banks (MDBs). We intend to meet our existing obligations to these institutions as we move, in an evolutionary way, toward a greater emphasis on bilateral rather than multilateral assistance.

In this process, we shall keep in mind that multilateral institutions carry out two major functions:

First, they mobilize additional capital from other donors for economic progress in developing nations, nations that are important to U.S. security and economic interests.

Second, they foster increasing efficiency in the international economic system by encouraging developing countries to adopt Western market-oriented policies that improve productivity.

The President is therefore requesting appropriation of $1.48 billion for MDB subscriptions and contributions for FY 82. Because this request has been held to the minimum it is essential to have your support for the full amount specified.

International Organizations and Programs

Voluntary U.S. contributions to international organizations and programs are another important element of our foreign development assistance strategy. Among the important efforts in this area are the United Nations Development Program (UNDP) and the U.N. Children's Fund (UNICEF). These activities provide basic technical, health and educational assistance to developing countries.

Conclusion

The program presented to you today represents our best judgment of the resources required to carry out our activities in these austere times. Cuts were made in the development assistance programs totaling over a billion dollars, a 26% reduction from the previous budget—equaling if not exceeding reductions proposed for the domestic agencies.

For the past two years Congress has failed to enact a foreign aid appropriations bill. This has caused us substantial difficulties. We have been forced to neglect vital aspects of our assistance programs; U.S. foreign policy interests have been undermined. We should work together in the authorization and appropriation of these fiscal year 1982 foreign aid requests to assure a U.S. partnership with the nations that strengthen our common economic and security interests. ☐

This article has been adapted from testimony in hearings before both houses of Congress in March.

LATIN AMERICA:

A Search for Solutions Amid Turmoil

A statement by Edward W. Coy

The United States has vital economic and security interests in Latin America and the Caribbean. In 1980 alone, the countries south of us purchased nearly $39 billion of U.S. exports, vaulting the region ahead of Canada and into second place behind Western Europe as a market for our products. Seventy-seven percent of all U.S. foreign direct and financial investment in the developing world is in Latin America and the Caribbean, as are 43% of all U.S. bank claims on foreigners. Produce from 10 million acres of U.S. cropland is exported to Latin American and Caribbean countries. We, in turn, depend on the region for significant shares of several important raw materials and other commodities, and it is in our interest that these supplies be maintained.

The U.S. role in the Americas is changing.

The continued health and growth of this large market is vital to our need to increase export earnings so that we can offset the effects of rising petroleum prices and create new, productive jobs for our own unemployed workers. Exports already account for one out of every eight or nine manufacturing jobs in the United States, and the importance of foreign sales to our income and employment is likely to be even greater in the future. For these reasons we must be responsive to the need for change in development structures, programs and institutions that countries must undertake to overcome their serious balance-of-payments problems. These problems confront almost all non-oil-producing Latin American and Caribbean countries as they struggle to cope with petroleum price increases, falling coffee and cacao prices, and rising debt burdens.

The geographic proximity of Latin America and the Caribbean has a direct bearing on our national security. Our vital concerns in the region include unimpeded use of the sea lanes adjacent to North America and the Panama Canal and continued access to oil from Venezuela, Mexico and other exporters in the hemisphere. Latin America and the Caribbean are also important to our efforts to limit the spread of nuclear and conventional weapons. Other important U.S. concerns are the increased flows of undocumented workers and narcotics across our borders.

For these and other reasons, we must be profoundly concerned about the growing economic problems and interrelated social and political tensions in the region since at least the early 1970s. These problems are now closest to the surface in Central America. In El Salvador, the establishment in power of either the extreme left or of the extreme right would be inconsistent with our interests. The poverty and inequitable patterns of growth that long characterized El Salvador—and sowed the seeds of revolutionary ferment—have also been the legacy of Guatemala and, to some extent, Honduras. We have been encouraged by the efforts made in Honduras to break with the old pattern and provide peacefully for more equitable growth and greater political participation. The growing violence in Guatemala indicates that time may be running out there as well, although that country has begun to take a series of measures that may still stem the tide.

Costa Rica, with a long traditional democracy and equitable growth is now experiencing its most serious economic crisis since the 1930s. We have strong interest in helping that country regain its economic footing, preserve its democratic traditions, and contribute to the revitalization of Central America as a whole. The most encouraging developments in Middle America in the last year have been in Panama. After a serious economic crisis in the middle and late 1970s, Panama's economy is now recovering, due largely to the canal settlement and to a more positive government attitude toward private investment. Nevertheless, Panama's oppressive debt burden means that its economy remains highly vulnerable to unfavorable external developments.

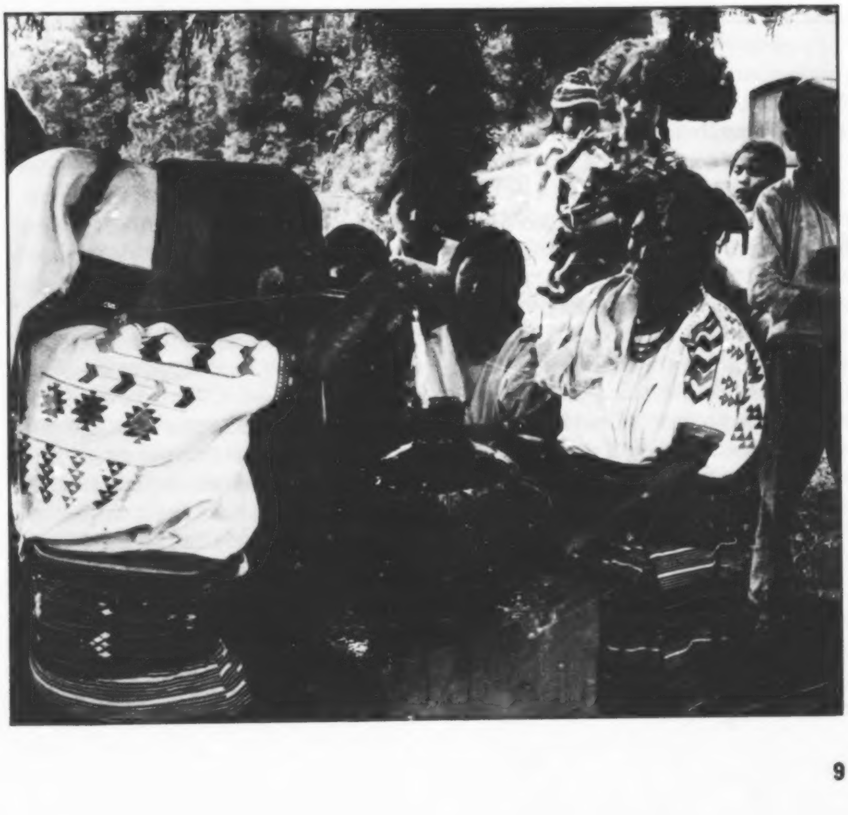
Vulnerability to external economic forces also characterizes the small economies of the Caribbean, which lie astride vital shipping lanes in the North Atlantic. Jamaica experienced a decline in per capita income for most of the 1970s, and its democratic traditions were shaken by growing crime, violence and extremist rhetoric. But the democratic traditions held. Jamaicans reaffirmed their support of democracy last year and elected a new government whose economic recovery program stresses, among other things, the need to revitalize the private sector. Economic recovery there will take many years and require much external assistance. Guyana—like Jamaica a major producer of bauxite and alumina—also experienced economic difficulties during the 1970s. Our interests there, as in Jamaica, call for continued support to the government's commitment to equitable development, encouragement of the country's private sector and greater attention to market forces.

In the Eastern Caribbean, most of the small island-states experienced stagnant or declining per capita incomes during the 1970s; their export performance has fallen far short of their need to pay for sharply higher petroleum import bills. Only in Barbados was economic growth satisfactory. In Grenada, a revolutionary group came to power in 1979 with a political orientation that views the U.S. with concern and suspicion. Continued economic stagnation in the Eastern Caribbean, and a growing sense of frustration, could lead others to seek similar remedies. Economic recovery in St. Lucia, Dominica, and St. Vincent and the Grenadines suffered a serious setback in September 1980 when Hurricane Allen wreaked its destruction on these islands.

Most of the population of the Caribbean, outside of Cuba, is on the island of Hispaniola, shared by Haiti and the Dominican Republic. Haiti, the poorest country in the Western Hemisphere, has been experiencing declining living standards in rural areas for decades. Thousands of Haitian "boat people" have come to our shores in the last few years seeking better opportunities and surveys show that many more would like to come. The major effort needed to alleviate poverty there will be difficult to set in motion and will not bear fruit quickly. Continued large-scale attempts at emigration will be inevitable. Poverty in the Dominican Republic is less pervasive but still serious. Rapid migra-

tion from farms to cities has created a disturbingly high unemployment rate in that country. A democratically elected government is struggling to come to grips with these problems.

The majority of the Latin American and Caribbean population lives in South America, which on the whole is more developed than Central America and the Caribbean. Nevertheless, there are large pockets of extreme poverty, notably in the Andean countries of Ecuador, Peru and Bolivia. The restoration of democratic governments in Ecuador and Peru has brought into office administrations genuinely committed to equitable development and to an important role for the private sector. Both countries are modest petroleum exporters, but these exports are expected to decline soon, and both countries need considerable assistance in relieving rural poverty by revitalizing their agricultural sectors. Rural poverty is even more widespread in Bolivia, which remains South America's poorest country despite its wide range of mineral exports. Unfortunately, the military coup in July 1980 has diverted Bolivia's attention from development problems and has sown the seeds for future unrest. We remain ready to increase our assistance to Bolivia when commitment to development reappears.



The Dimensions and Significance of Lack of Development

The vital interests of the United States in the Western Hemisphere are clear. It also is clear that these interests will best be protected if we encourage and support the aspirations of the people of Latin America and the Caribbean. The unrest we see in the region today is due in very large measure to the inequitable development patterns of the past and, in a number of countries, the present. This unrest has been aggravated by slower economic growth, caused by the unhealthy state of the world economy. It has also been aggravated to some extent by the actions of those hostile to our interests. But the fundamental cause of this unrest remains the same—the persistence of poverty and of inequitable patterns of development.

AID Strategy

AID's strategy is to help respond to this challenge, not just because we support the aspirations of the Latin American and Caribbean people, but also because we believe that this is the most effective way of furthering U.S. interests. AID, of course, cannot do the job all by itself. We must work together with other bilateral and multilateral donors, and we need to work in an environment where other instruments of U.S. international economic policy support the same goals. Above all, we must constantly seek collaborative approaches with the governments of the countries in which we work and with other governments of the region. The problems we are working to solve are common problems; we must all cooperate in finding and carrying out solutions.

AID cooperates with Latin American and Caribbean governments by assisting them to design, test and adopt new policies, to build new institutional structures and to develop new service systems to better meet the needs of the poor and to increase productive employment opportunities. Priority is given to countries with a strong commitment to equitable development and sound economic policies.

Our programs are carried out not only with governments but also with a variety of private-sector organizations. We have a long history in the region of support for cooperatives and credit unions. We are working with other groups to improve the status of women and to raise public awareness of the dangers of environmental degradation. Through projects with the Latin American Agribusiness Development Corp. (LAAD), we are helping small farmers earn higher incomes. Consistent with the recommendations of a private-sector mission that recently reviewed agricultural development in Central America and the Caribbean, AID plans to give even more support to private-sector agricultural and agro-industrial activities.

AID's strategy is more effective when Development Assistance can be combined with other funding instruments that provide greater flexibility and can be activated quickly to respond to U.S. interests when emergencies require prompt attention to balance-of-payments and employment problems. Such a quick response capability, of course, is what makes Cuban assistance so tempting to some countries in the region. We have been at a considerable disadvantage because of our very limited capacity to respond in the same way. This situation places a premium on close cooperation between AID's bilateral assistance program and the overall economic support programs of the IMF and IBRD. However, our limited capacity to support their stabilization efforts directly has hindered our ability to insure that stabilization is accompanied by continued economic growth and development.

Economic Support Funds and PL 480 assistance (food aid) are important instruments for achieving these objectives. We believe that U.S. interests would be better served if we could count on greater availability and greater flexibility in the use of these resources.

AID's assistance to Latin America and the Caribbean is provided through its bilateral missions and also through several regionwide projects and two sub-regional programs. The Central America regional program remains a key part of our strategy for the countries of Central America and Panama. Peace and security in this sub-region will depend in the long run on the evolution of democratic governments and pluralistic, equitable societies. Each country is different, but developments in any one country are closely linked with the fate of the others. Despite the recent lack of economic progress and the political upheavals in several countries, trade among the five Central American Common Market countries has continued to expand and regional cooperation has continued on many fronts. The 1980 peace treaty signed by El Salvador and Honduras is a most welcome development. Many problems

remain to be solved, but it is in our interest that further cooperation among the countries of the region be encouraged. A strong sub-regional economy, united by common approaches to common problems, should serve as an effective check to extremist tendencies.

Under the Caribbean Region program, assistance is channeled to the small island states of the Eastern Caribbean, as well as Belize, through such regional institutions as the Caribbean Development Bank, the Eastern Caribbean Common Market Secretariat, and the Caribbean Agricultural Research and Development Institute. Some of our projects also benefit the wider Caribbean sub-region. The United States has been a strong supporter of the Caribbean Group for Cooperation in Economic Development, which brings together 47 donor and recipient countries and international institutions in order to revive the sagging economies of the sub-region. The Caribbean Group has been encouraging sound economic policies while providing recipient countries the resources they need to finance priority development projects. We believe that the Caribbean Group is planning an important role in arresting the economic decline of many Caribbean countries and laying the groundwork for renewed growth.

FY 1982 Program

The proposed program for FY 1982 totals $385.3 million, including $120 million from the Economic Support Fund (ESF) and $265.3 million of functional Development Assistance. Of the combined total, $198.6 million, or 52%, would be provided as loans and $186.7 million, or 48%, as grants. Other proposed U.S. assistance to Latin America and the Caribbean includes $158.1 million for PL 480 programs and $40 million for Housing Investment Guarantees.

The FY 1982 program will be implemented through 13 bilateral programs and three regional programs. Some $174.3 million, or 45% of Development Assistance and ESF resources, is programmed for Central America. Another $149.4 million, or 39% of the total, is allocated to our programs in the Caribbean. South America is scheduled to receive $45.4 million, or 12% of the total, while the remaining $16.2 million, or 4% of the total, will support regional programs with such organizations as the American Institute for Free Labor Development and the Inter-American Institute for Agricultural Sciences.

Agricultural and rural development will account for nearly half of AID's Development Assistance budget. Special emphasis will be given to agricultural research, extension and supporting activities that will result in greater food production, higher incomes and increased employment for small farmers and other poor people in rural areas. Increased support will also be given to private-sector agricultural and agro-industrial activities consistent with these objectives. New programs in soil conservation, natural resources management, and forestry will be supported in Haiti, the Dominican Republic, Honduras, and Ecuador.

Population planning activities will expand by 40% from their FY 1981 level. These activities will improve the capacity of countries to relieve some of the pressures on their scarce natural resources and will permit women to play an increasing role in development.

Health sector activities will focus on consolidating low-cost health systems in countries where the basic model has already been introduced, and on extending this model to other countries.

Education and human resource development programs will emphasize rural primary education; non-formal vocational and adult education; and training programs to relieve critical shortages of managers, administrators, technicians and sub-professionals.

Special development activities will stress job creation, especially in small private enterprises. AID funds will also continue to support alternative energy programs; small, community-initiated projects; and a variety of other small projects undertaken through private voluntary organizations.

AID's role in Latin America and the Caribbean has changed considerably over the past two decades. We are no longer the dominant source of financial assistance. Our primary task now is to play the lead role as a catalyst and risk-taker, attracting complementary public and private resources in support of innovative solutions to the problems of slow economic growth, poverty, unemployment and inequality that have created so much unrest in the region. In the face of rapid population growth and deteriorating natural resources, much of AID's effort is aimed at finding solutions for the long run. But given the balance-of-payments problems and social and political unrest now confronting us in Latin America and the Caribbean, protecting U.S. interests requires that we be in a better position to provide some short-run solutions as well. □

Edward W. Coy is Acting Assistant Administrator for AID's Latin America and Caribbean Bureau. This article has been adapted from testimony in hearings before Congress in March.

AFRICA:

World's Poorest Struggle for Survival

A statement by Roy A. Stacy

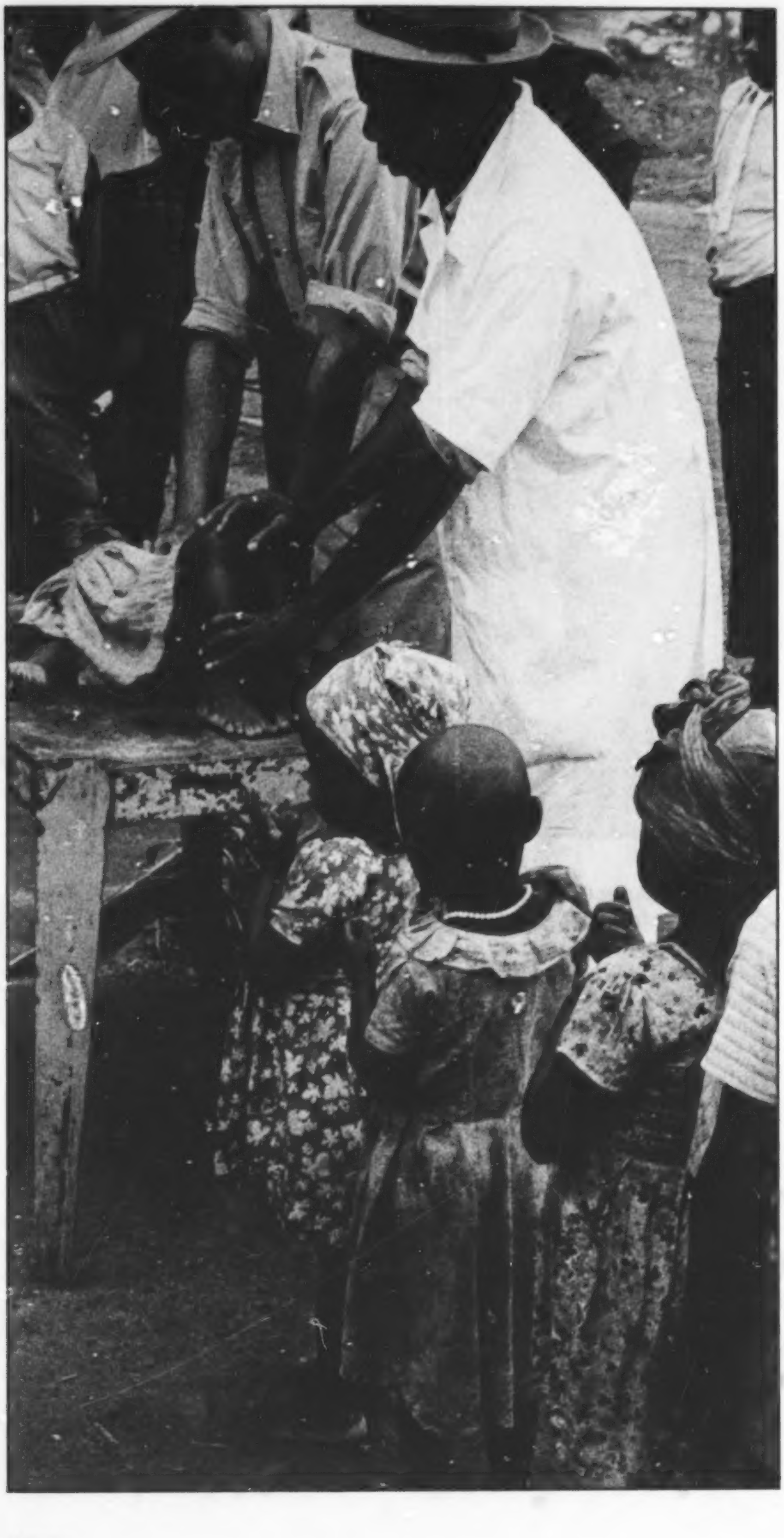
U.S. and African interests are at stake.

U.S. economic assistance to Africa provides the opportunity to work on perhaps the most complex development problems in one of the poorest regions of the world, Sub-Saharan Africa. Nonetheless, this area has the potential for assuming, despite its poverty, an important economic role in the international community. Its markets and exports may now be modest by world standards, but in the coming decades its contribution can be significant and critical in the face of rapidly growing world demand for minerals, raw materials, food, investment opportunities and new markets.

For FY 1982, AID is requesting a total of $836 million for its African programs. Compared to FY 1981, this request represents a 29% increase in Development Assistance and a 59% increase in Economic Support Funds.

The $390.5 million in Development Assistance for FY 1982 will concentrate in the following areas: $154 million for agriculture and rural development; $46 million for health; $37 million for education and human resources development; $41 million to address selected development problems; and $5 million for family planning. In addition, another $32 million will finance population activities in Africa. The Sahel Development Program, which is a separate functional account for which $107.5 million is requested, focuses also on food production, environmental reclamation, health and related training. In addition to the Development Assistance, $231 million in Economic Support Funds is requested primarily for programs in Southern Africa and the Horn. About $215 million in PL 480 (food aid) assistance, including $132 million in Title I (direct food aid) and $83 million in Title II (food for work), will also be programmed to meet growing concessional food needs and help stimulate greater local production.

Although AID assistance to Africa has increased since 1975, several factors have limited the impact. For



example, inflation has in fact reduced the real level of aid from FY 76-80—during a period when the program in Africa has been expected to reach more countries. In addition, catastrophes such as drought and political upheavals, creating vast populations of refugees, have exerted demands on extraordinary emergency assistance.

Our primary goal remains increasing food production. Africa is the only region of the world where per capita food production has declined over the past 20 years. This has meant that the demand for food imports has soared at a time when foreign exchange and heavy country debt is severely limiting commercial import possibilities for most African nations. The reasons for the generally unsatisfactory state of African agriculture are complex. They include a growing rural labor shortage. Because younger people are migrating in ever-increasing numbers from the countryside to the cities, the rural population is becoming an aged one. Climatic extremes and a growing scarcity of easily tillable land, the deficiency of applied farming research, the absence of a proven technological package and crop mix to offset the rising cost of improving technology (fertilizer, pest and disease prevention, extension and management), are all factors. Other problems are a lack of roads; government interference in marketing; and an "incentive" price that is all too often biased against agriculture—especially when it is in the form of overvalued exchange rates, lower producer prices and subsidized urban consumption.

While we are extremely concerned about food supply over the next several years, over the long run there is some cause for optimism. A number of African nations have the physical potential to produce surplus food grains for export to neighboring deficit countries. The continent is blessed with major river basins and other water resources that can eventually contribute to closing the food gap, as well as to diversifying the region's exports. We intend to work toward greater intra-African trade, particularly in food grains.

Energy availability and deforestation share the No. 2 berth among the most critical problems in Africa. In many countries, people are decimating the forests in their search for fuelwood. The United States will work with other Western donors to expand our reforestation effort. Small-scale, decentralized activities related to renewable energy will be funded as a basic part of rural development efforts. These new activities will complement intermediate efforts to assist rural agriculture production.

One of the most critical problems since the mid-1970s has been the growing number of refugees and displaced persons within sub-Saharan Africa. Political conflicts within and between countries, economic dislocations and climatic hardships, such as drought, have generated millions of displaced persons and the largest refugee population in the world. Moreover, the return of these people to their homes is unlikely in the foreseeable future.

The presence of a large number of displaced persons drains the countries' scarce financial and managerial resources, overburdens their limited infrastructures and threatens their economic and political viability. It is more than just a question of life support. The $20 million Africa Resettlement Services and Facilities project will help many of the African nations that now have the largest concentration of displaced persons and are ill-equipped to provide for them. We urge the committee's strong support for this new and needed initiative so that the very high costs of emergency programs can be reduced in the future.

A fourth, and intensifying, problem is over-population. Africa has the highest rate of natural population growth of any developing region, averaging nearly 2.9% annually. Moreover, population growth rates will continue to increase between now and the year 2000 because the factors encouraging high fertility will change very little. The balance between human beings, animals, food and land in some countries will deteriorate. In Africa, the general perception of survival is still closely linked to the number of healthy offspring who can work on the family farm. Labor remains the key scarce input in high-risk farming systems. Until infant mortality rates begin to fall, until the decline in per capita food production is reversed and until more modern farming techniques can be introduced, it will be difficult to convince rural Africans that they need to reduce the size of their families. Many African governments, however, now appreciate the need for family planning, and 34 countries have started some kind of family planning program. The introduction of family planning and population activities in Africa must be clearly tied with efforts in food production, health, and education.

Another major area of need is health. Totally inadequate health services (*i.e.*, only one-fifth of all people can obtain adequate health care) and the consequences pose one of the most serious problems facing Africa. The problem is greatest for women and children. For example: Approximately half of the deaths in African countries occur among infants in the first year of life; and one-third of all children will die before reaching 5 years of age. Additionally, 75-80% of infant and childhood illness and death is attributable to infections and/or communicable diseases and malnutrition. Many who reach adulthood will be less productive because they have incurred diseases. The majority of endemic diseases can be prevented by immunization, nutrition programs and other public health measures, and there will be more emphasis on these. In response to overall health problems of

the rural poor majority, AID assists African countries in planning, managing and implementing integrated (health/nutrition/family planning), low-cost rural health programs. Environmental sanitation and provision of safe-water supplies also will receive more support.

In all of these programs, primary components are broad training, and expanding management capability in order to build an institutional capacity by which African countries one day may plan and execute their own development.

PL 480 resources are a valuable complement to the Development Assistance Program in Africa and are integrated at both the planning and project level. The primary objective of PL 480 has been to help governments with their food needs. Title I concessional sales programs are predicated on balance-of-payments and foreign policy considerations. Title II programs are based primarily on humanitarian concerns through government-to-government arrangements, U.S. non-profit voluntary agencies and multilateral organizations. In keeping with the policy to use food resources for basic development acitivities, Title II (206) and Title III food for development programs are under way in Senegal, Sudan and Upper Volta. We anticipate similar programs in FY 1982 in Mauritania, Cape Verde, Rwanda, Tanzania and Somalia. These food resources not only provide local currencies to support new food production actions, but also provide an invaluable instrument for policy dialogue and policy changes designed to establish stronger producer incentives.

Other donor coordination is especially important for U.S. programs in Africa. The United States provides only some 8% of Official Development Assistance (ODA) to this region. This means that we have an important stake in efforts to assure collaboration between ourselves and the other principal donors to Africa. This task has assumed great importance in recent years. The following are several initiatives that are especially significant:

- **The Sahel:** The Sahel Development Program (SDP) is a unique long-term program through which eight African countries cooperate with Western and OPEC donors in the OECD-based Club du Sahel. While SDP started as a U.S.-French initiative, 23 bilateral donors are now active. The club has been cited by the Brandt Commission as a unique experiment in North-South cooperation.
- **CADA:** Concerted Action for Development in Africa, or CADA, is an association of the six principal bilateral Western donors to Africa: Germany, Belgium, Canada, France, Britain and the United States. CADA is looking into more focused actions in food research, irrigated agriculture, reforestation, child immunization and rehabilitation of transportation systems in Southern Africa.
- **Arab/OPEC Funds and Japan:** Several Arab States have established bilateral development aid funds. They also operate some multilateral funds and, together with non-Arab members of OPEC, provide substantial development assistance to many African countries. The Arab/OPEC funds are interested in strengthening their cooperation with the Western donors working in Africa.

Unless reversed soon, the converging and worsening development problems in Africa portend alarming food crises, new waves of refugees, political instability, and the loss of economic opportunity for both the United States and Africa. □

Roy A. Stacy is Acting Assistant Administrator for AID's Africa Bureau. This article is adapted from testimony in hearings before Congress in March.

NEAR EAST:

Support for Peace and Progress

A statement by Alfred D. White

U.S. aid is helping stabilize an area where conflict rules.

The countries of the Near East to which the United States gives aid reflect a range o foreign policy interests and economic and political conditions. To meet U.S. objectives we are requesting $40 million in Economic Support Funds (ESF) for Jordan, Lebanon and Oman and $21.1 million in Development Assistance for Yemen. We also expect tc provide $565,000 in PL 480 Title II (food aid) for Jordan to be distributed through voluntary agencies

Jordan

We are requesting $20 million in ESF funds for Jordan in FY 1982. This is less than the amount proposed in previous years. The reduction, which began in FY 1980, largely reflects continued improvement in the economy

and substantial assistance from other donors. Economic growth has averaged about 9% annually over the last five years. Per capita income now exceeds $1,000, despite an extremely high population growth rate of 3.6% annually. With nearly half the labor force abroad in Saudi Arabia and the Gulf States, unemployment is nonexistent. In fact, Jordan now imports unskilled labor.

Water is still Jordan's top development problem, however. In FY 1982, $15 million of the $20 million proposed will be used to build water and sewage systems for the towns of Karak and Madaba. These two projects are part of a country-wide development plan for urban water and sewage services started in 1978 to deal with problems derived from rapid urban growth.

The balance of funds proposed for FY 1982 is planned for technical assistance activities in agricultural production and in community-based social development.

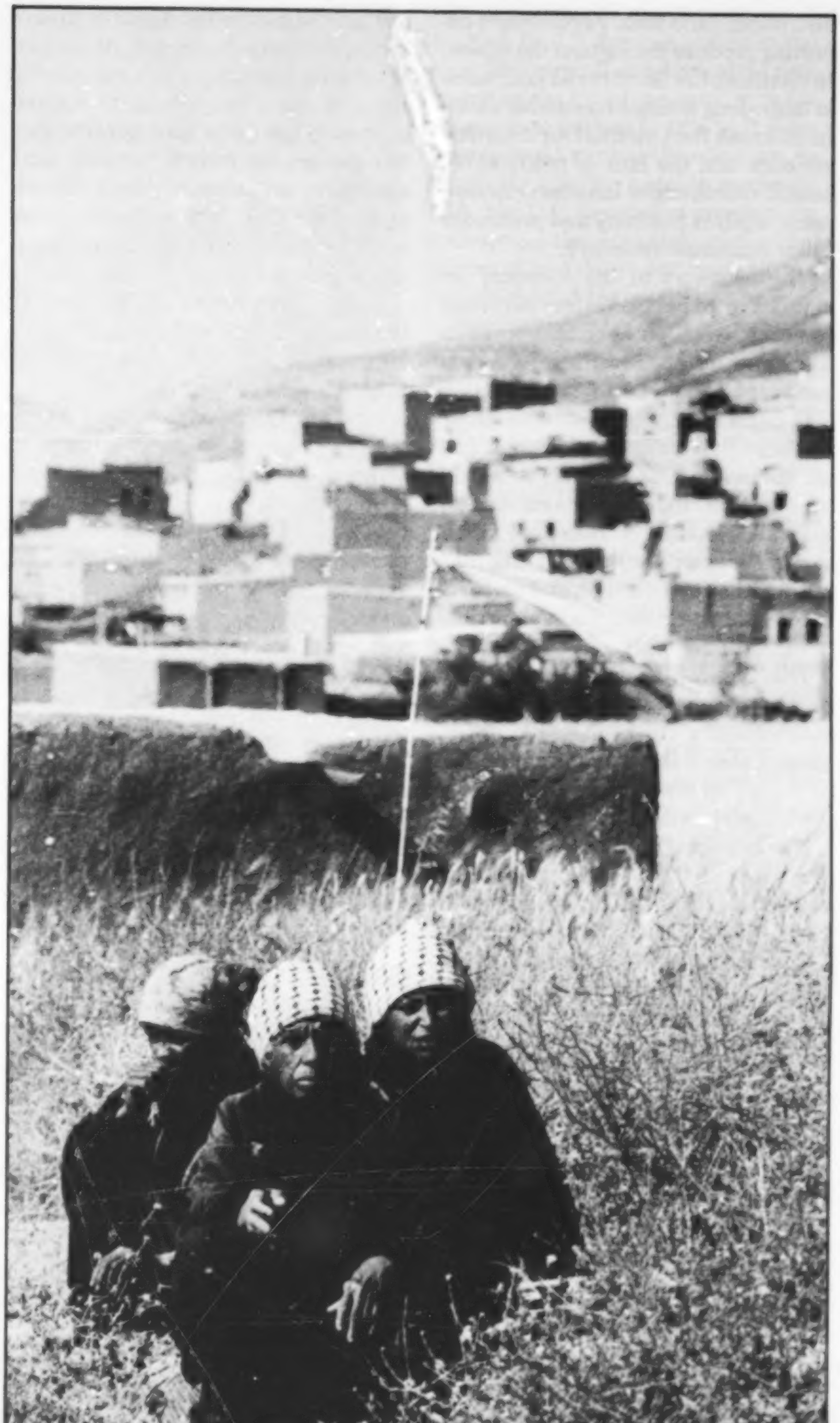
Lebanon

We are requesting $5 million for Lebanon to continue a program of private voluntary organization activities and support to the government's reconstruction efforts.

Political discord continues to plague Lebanon. Despite a moderation in the level of tensions since 1977, sporadic violence continues both between and within the major communities. The central government continues its efforts to extend its authority and to achieve national reconciliation, but a variety of illegal, armed groups and militias are reluctant to cooperate and have frustrated the government's efforts.

Yet there has been some economic progress. Economic activity is thought to be roughly 70 to 80% of the 1973 prewar level. Most observers detect improvements during the last two years, especially along much of the coastal area. That area, particularly around Tripoli, where light industry, much of it relocating from Beirut, appears to be developing rapidly.

Agriculture in the Bekkaa Valley is



also doing quite well. Farmers are exporting produce throughout the region. In contrast, the Beirut area continues to limp along without noticeable gains. In all areas the potential for renewed violence and the lack of political cohesion discourages long-term investment, inhibits planning and precludes fuller economic recovery.

The mainstay of the economy remains the export of labor services; some 250-300,000 Lebanese work in the Arab oil states. These workers send home about $1 to $2 billion dollars each year. Together with other financial flows, these earnings ensure an adequate import level, which in turn sustains living standards and allows for a modest increase in foreign exchange reserves. Reserves are now approximately $6 billion and can provide important support when the time is right for rebuilding.

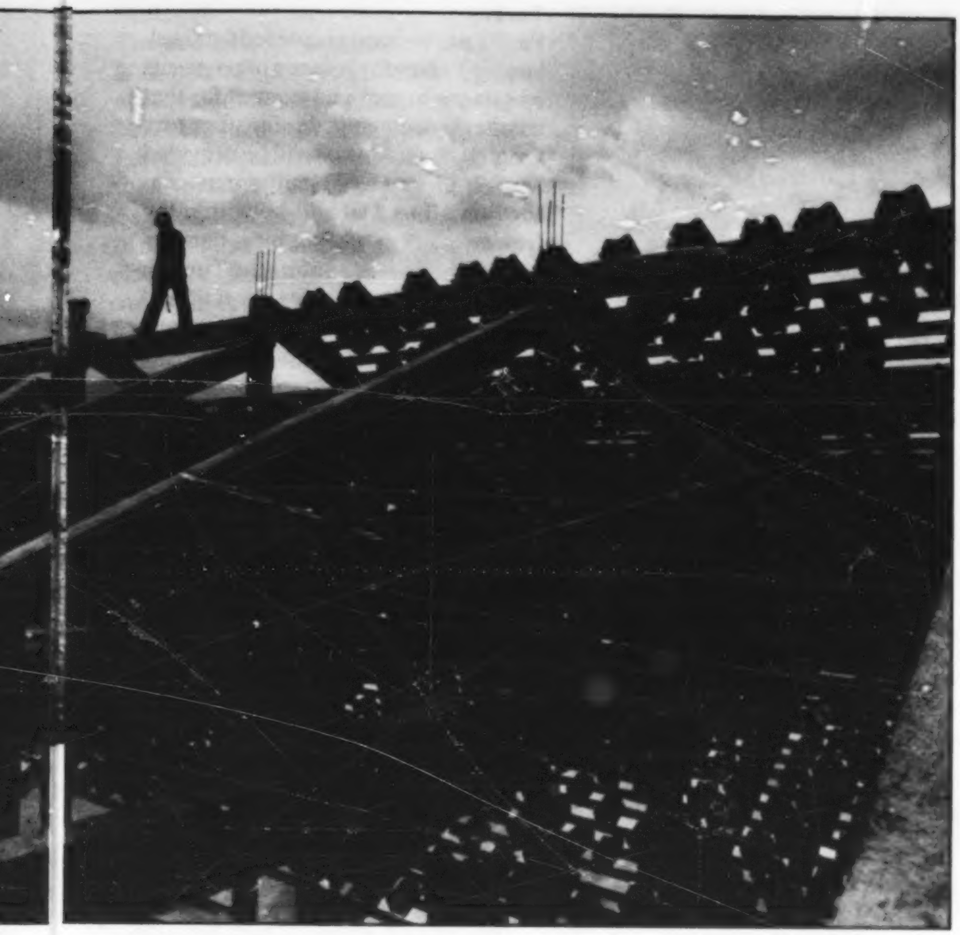
Last year, the subcommittee requested assurances that the Lebanese government's comprehensive development plan is in place and asked AID to report on how its projects fit into the country's plan.

The Lebanese have done some broad planning. In 1977 the government created the Council for Development and Reconstruction (CDR) and charged it with coordinating Lebanon's reconstruction and development effort. It produced a broad reconstruction program, some preliminary economic analysis and cost estimates, and a listing of priority projects. More recently the CDR formulated, and the government in July approved, a 12-month expenditure budget for the use of Arab aid. This program allotted some $290 million among specific priority projects. Included is rehabilitation work on the Beirut airport and seaport; the telecommunication system; the highway system and the expansion of power generating capacity. To date $170 million in Arab aid has been provided for this program.

Unfortunately, political and security conditions do not yet permit the start of a comprehensive, systematic reconstruction effort. Nevertheless, within the limitations we ensure that our programs are targeted on important Lebanese priorities. In its earlier efforts at developing project priorities and more recently in its budget planning, the Lebanese government has designated health, housing, and education as priority needs. These priorities have also emerged from our bilateral discussions on program priorities with Lebanese officials.

Given this situation, we are continuing to provide economic assistance to Lebanon from the ESF account through U.S. private organizations with demonstrated effectiveness and close working relationships with the government of Lebanon. We believe this is the most effective way our funds can support both our political and economic interests in Lebanon.

The requested $5 million for FY 82 is needed to continue support for health education, credit cooperatives, vocational training, private social institutions and development planning, and to begin a new program in housing. These assistance programs contribute directly to the welfare of the Lebanese people. They provide a tangible expression of U.S. good will and concern and tend to strengthen the forces of moderation and political cohesion.



Oman

For Oman, we are requesting $5 million in grant funds and $10 million in loans for the Omani-American Joint Commission. The Joint Commission was established in 1980 as a part of our expanded economic, political and security relationship with Oman. The Joint Commission will sponsor or assist development projects, offer opportunities for training and promote or facilitate commercial and technological exchanges between the two countries.

In late FY 80 the first $5 million in grant funds was obligated for Joint Commission programs and the commission is now operational. Initial discussions with the Oman government on Joint Commission projects suggest that the primary focus of activities will be on agriculture, fisheries, water and health. We expect to finance the design of a system of small check dams to capture rain water runoff to recharge aquifers. Participant training is also an early possibility.

The second tranche of grant funds requested for FY 82 will be used to continue to support the operations of the Joint Commission; develop projects; and finance training and other activities. We expect to use the loan funds to support construction of the small dams to be designed in FY 81.

Yemen

In addition to these Economic Support Fund programs, we are requesting $21.1 million in Development Assistance funds for the Yemen Arab Republic (YAR) in FY 82.

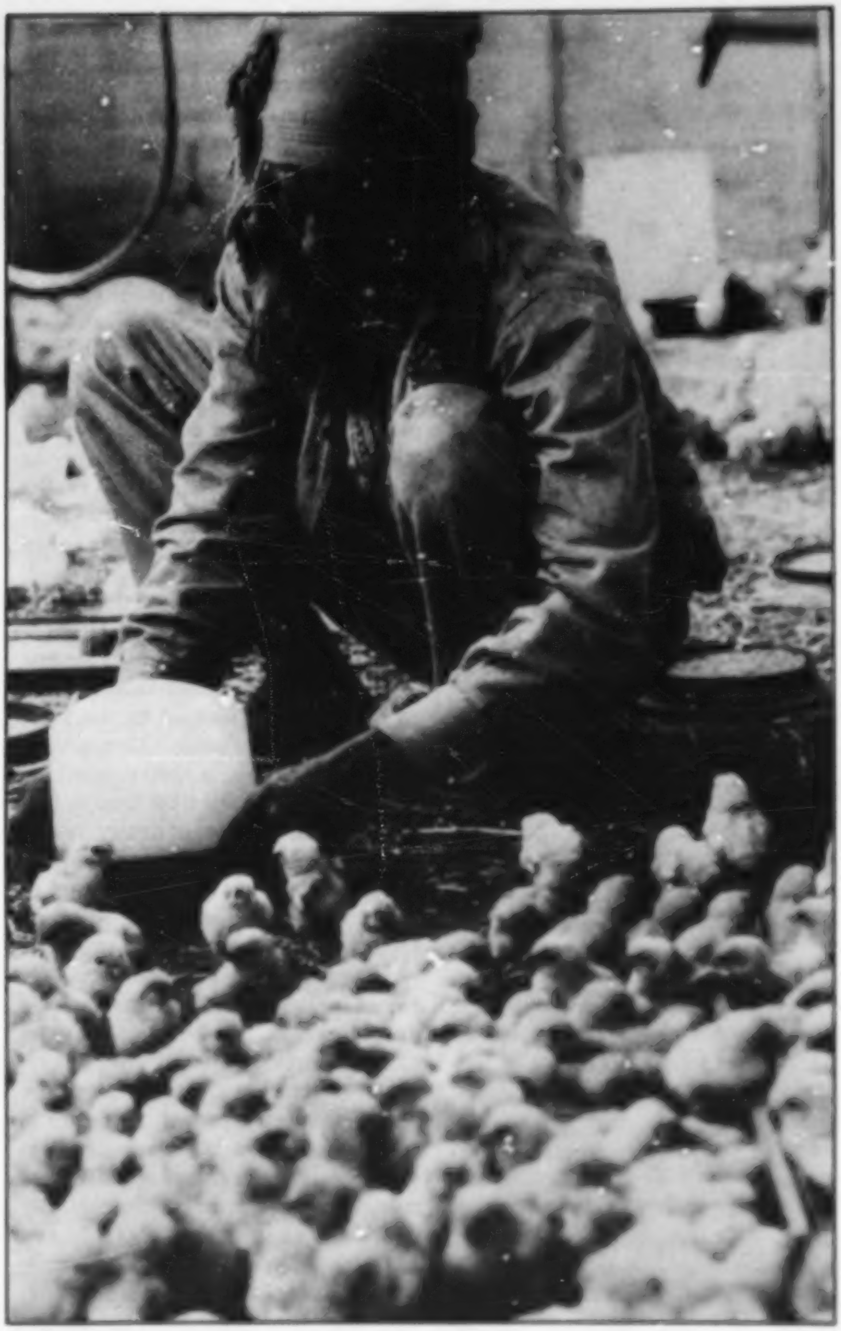
In the past year, events in the Middle East, particularly in the Persian Gulf, demonstrated the importance of the YAR to U.S. foreign policy in the area. The turmoil and disruption generated by the Iran-Iraqi war, plus the danger that parties hostile to U.S. interests could exploit the situation increase the need for a stable, moderate YAR. The U.S. assistance program, by addressing the economic and social causes of instability and poverty, is a key element of this policy.

Past testimony before this committee has emphasized the paradoxical nature of the economy. On the one hand, per capita GNP, fueled by migrant remittances, has increased dramatically in recent years (to $540 in 1979). On the other hand, the YAR remains a country of extreme poverty as measured by most quality-of-life indicators.

The new decade marks a departure from the rapid growth of the 1970s—migrant labor and remittances appear to be leveling off. Other factors such as capital flight caused by the 1979 conflict with the People's Democratic Republic of Yemen, a 1980 current account deficit for the first time in five years, and a significant drawdown of foreign exchange reserves to pay for increased imports are harbingers of the economic problems that will face the country in the next few years.

As a result of these problems, the role of foreign aid in financing Yemen's development plans has become even more important. Although aid has increased steadily over the past few years, the development challenge is still monumental. Life expectancy is 45 years; literacy remains at 26% for men, 2% for women; infant mortality continues at a high rate of 160 per 1,000 births. Without adequate schools and teachers, safe water, sanitation and basic health services, the people of Yemen have no opportunity to improve their lives.

Our development effort in Yemen seeks to address these basic deficiencies by focusing on a broadly based program of training and technical assistance to develop human resources and institutional capacities in such key sectors as education, agriculture, water and rural development. To do



this we are relying heavily on U.S. universities and private voluntary agencies.

The U.S. aid program is uniquely capable of providing the kind of technical assistance and training needed for a long-term strategy of institutional development. As such, it complements very well the capital and physical infrastructure focus of other donors. The proposed budget for FY 82 also contains $300 million for Turkey, $20 million for Portugal and $7.5 million for Cyprus all in Economic Support Funds. We are also managing prior year disaster relief funds for Italy, Yugoslavia and Romania, and Economic Support Funds for the Azores.

Turkey

For FY 82, we have requested $300 million for Turkey for balance-of-payments assistance to continue support for that country's economic stabilization program. U.S. assistance will be provided as part of an OECD multidonor consortium effort and will be within the framework of an IMF stabilization program to be carried out by the Turkish government. We admire the political courage which the Turkish government has shown in implementing its economic reform programs. We believe Turkey's allies and friends should continue to help the Turkish Government maintain the momentum already achieved in addressing fundamental problems in the economy.

Economic conditions improved only slightly in the months immediately following the introduction of the reform. The general price level rose sharply as the State Economic Enterprises doubled, tripled or even quadrupled prices, shortages were alleviated only slowly because of Turkey's precarious balance-of-payments situation and a rash of strikes; exports and workers' remittances remained at depressed levels; and output did not increase.

The United States, other OECD donors and Turkish authorities soon will jointly review the details of the economic stabilization program and consider the needs for external financing to assure the continued success of the reform program. The next consortium pledging session is tentatively scheduled for early May. We anticipate that the consortium again will provide sufficient assistance to insure continued economic recovery.

Cyprus

In FY 82 we are requesting $7.5 million for Cyprus to demonstrate the continued U.S. concern for the people of Cyprus and U.S. interest in a solution to the problems that separate them. As in prior years, U.S. funds will be transferred to the United Nations High Commission for Refugees for administration and will be used for relief and rehabilitation.

Portugal

The $20 million request for Portugal is in accordance with the exchange of diplomatic notes dated June 18, 1979, between the United States and Portugal regarding Lajes Air Base in the Azores. In addition to military assistance, the United States also agreed to provide $80 million in economic assistance, subject to congressional authorization and appropriation. The FY 82 funds will be for the third of four tranches which the government of Portugal plans to use for the economic and social development of the Azores, one of the least developed regions of Portugal.

Most activities funded in prior years are nearing completion. The pipeline has been reduced to under $50 million. The first $5 million provided in FY 80 for reconstruction assistance following the Jan. 1, 1980, earthquake, has been fully disbursed and a design team is now in the Azores examining a low-cost housing project to be funded with the $5 million in the FY 81 budget.

Overall, Portugal's economic situation has improved markedly due to a conscientious application of a stabilization program begun in early 1978.

Disaster Assistance Programs

I would like to briefly touch upon the reconstruction programs that are being mounted to help governments and their people overcome the effects of major earthquakes.

Southern Italy Reconstruction Program

The earthquake last year in Italy was considered the most devastating disaster to strike Western Europe since World War II. After helping in relief efforts, AID sent a team in December to ascertain what the country would need to rebuild. The team found that school buildings had more damage than had any other public facility. They also found that the Italian people were concerned that the lack of schools would stimulate emigration, further weakening the economic base of the area. Because schools would have an impact on a large portion of the affected population and would also be a permanent and highly visible symbol of American friendship for the Italian people, AID plans to focus U.S. assistance there—for building 12 medium to large schools. The $45.2 million now available [relief assistance was $4.8 million] will be obligated in agreements for specific projects.

Greece

In February and March 1981, Greece was hit with a series of relatively strong earthquakes. According to current estimates, 78,000 people have been made homeless, but fortunately there have been relatively few fatalities. As soon as the earthquake struck, the U.S. ambassador made use of his discretionary authority and turned to military channels for tents, blankets and other immediate relief supplies. These supplies and others were quickly provided to Greek authorities and subsequently charged to AID disaster appropriations. Currently, the United States has committed almost $800,000 for emergency relief to Greece. As of now, the Greek government has not requested any reconstruction assistance.

Romania

Following the earthquake in March 1977, Congress authorized $20 million for Romanian assistance. An initial $7 million from the International Disaster Assistance Account was used to purchase repair and replacement medical equipment on an emergency basis. Of the $13 million appropriated in October 1977 for additional building repair and medical equipment, educational equipment, seismic monitoring equipment and earthquake equipment, $11 million has been disbursed.

Yugoslavia

Yugoslavia received a $10 million grant which was executed in September 1979 to finance reconstruction of six schools and six health facilities. To date, one school and one health clinic have been completed. Four other schools and two health facilities are more than half-finished. □

Alfred D. White is Acting Assistant Administrator for AID's Near East Bureau. This article has been adapted from his testimony in hearings before Congress in March.

ASIA:

A Question of Balance

A statement by Frederick W. Schieck

The people-food imbalance is at the core of underdevelopment.

This year, as in years past, our program reflects the great needs and unrealized potential of millions of people who live in Asia. Lacking economic opportunity and held back by hunger and disease, these men and women, willing but unable to provide for themselves, constitute a wasted resource not only to their nations but to the world at large.

While this statement may sound all too familiar, progress is being made which reflects well on both the Asian nations and on our own country. But poor countries do not develop overnight, just as we didn't. The basic problem we are addressing is the one that lies at the core of underdevelopment: The food-population imbalance.

First, a word about the population problem, which claims about 17% of our budget. Asian nations have made dramatic changes in slowing population growth. India's birthrate has dropped from about 41 per thousand in 1966 to under 36 per thousand today. Its population growth rate is down to about 2% in the past decade. But health and sanitation advances—prerequisites for economic development—as well as the general intractability of customs have continued to

boost population beyond tolerable limits in many Asian nations.

There has been important progress in food production. To cite an example from India again, that country has withstood severe crop failures on the strength of home grown reserves —a first in modern Indian history. India can look forward to sustained food grain self-sufficiency, even with per capita consumption rising somewhat. Over the last 10 years the Philippines has been able to dispense with food grain imports almost entirely. Food grain production has grown at 4% per year on the average, well ahead of population growth. Even in Bangladesh, the country that for so long has epitomized food shortages and hunger, there has been noteworthy progress. As a result of good weather, sustained price incentives and ample fertilizer, Bangladesh today is reaping record harvests. Wheat production has surpassed all expectations—over a million tons last year, up from 105,000 tons in 1970.

However bright these statistics, they are only a beginning. By one calculation, Asian countries must achieve annual increases in agricultural production of 4% if the 60-million-ton food gap projected for 1990 is to be closed. Our effort in this area will use about 69% of the entire budget for Asia. Our program will concentrate increasingly on five areas: irrigation, particularly water management; national agricultural research, education and extension; increasing upland and secondary crop yields; improving watershed management; and improving agriculture sector planning, pricing and marketing capabilities.

The food-population relationship also has a new dimension: energy. Energy shortages and higher fuel prices threaten many countries' hard-won gains in food production, and for others push production goals further and further into the future.

Almost all of the Asian countries are dependent on imported petroleum. For too many of the Asian countries, the choice will be between using foreign exchange to pay for energy or for future development investments. Such choices mean a slowdown in the rate of growth in agricultural production. The cost of imported oil is beyond reckoning in human terms, but not financial ones:

Sri Lanka's oil imports have jumped from 7% to 51% of foreign exchange earnings over the past eight years. And this year, Bangladesh, a country with no fat to trim, will pay over half of its foreign exchange earnings for imported oil. India's oil imports cost $264 million in 1972, and required 8% of its foreign exchange earnings. This year, India will spend $6 billion for imported oil and use 70% of its annual foreign exchange earnings to pay for it.

By and large, Asian countries are coping with the rising cost and scarcity of energy by adopting conservation measures, reducing subsidies and developing new energy resources. AID will devote $32 million, or 7% of the 1982 Asian program, to energy as part of a multi-year effort lasting through FY 1986. The energy program will focus on the development of fuelwood supplies and renewable energy resources while supporting overall national energy planning. This strategy complements the World Bank's expanding capital assistance program in conventional energy development, including a planned, small-scale hydropower project in Thailand, energy planning in Indonesia, and planned projects to grow and harvest

fuelwood in the Philippines and Nepal.

The growing ability of the Asian countries to manage their own development efforts, to undertake difficult policy changes, support complex programs and alter them as needed is becoming more and more apparent. In the long run the development—and the very independence—of the Asian countries depend on the capability of their own national and local institutions. The availability of trained personnel, of strong, capable institutions, is an important limiting factor on the pace of development. Thus, AID-supported programs such as the local resources management and rural services center projects in the Philippines and the provincial area development and regional planning projects in Indonesia are designed to support national government efforts to decentralize program planning and decision making and mobilize local resources.

Because we believe that it is important to understand whether or not our investment is paying off, we have undertaken a number of evaluations not only to guide project implementation, but also to structure subsequent projects, and to identify the common denominators which can then help in designing similar projects and programs where needed. For example:

- All senior county level officers of the Bangladesh family planning program are being trained in Indonesia, learning first-hand the elements of a successful family planning program. Moreover the lessons learned in Indonesia were applied to the new population project in the Philippines.
- The Philippines rural electrification project guided us in Indonesia and in Bangladesh. In each of these countries, moreover, other donors have expressed the wish to follow and pattern their rural electrification projects after ours.
- The findings of major evaluations of food aid programs in India, Bangladesh and the Philippines will lead to better integration of food aid in development programs throughout the region.

Our achievements have an impact beyond the individual projects and the resources we provide. AID recipients and donors alike look at us for leadership and technical expertise, especially in agriculture, health and family planning.

Among international donors the United States continues to be a leader in the techniques of development assistance. . . .

The United States has been a leader, first in the policy shift under the Congressional New Directions toward basic human needs programs, and then in developing the programs themselves:

We have led with food production programs built around the principle of incentives for small cultivators.

We have led with primary health care and family planning service outreach.

We have been among the first to recognize the need to address the distinct problems of women, to encourage decentralization and local initiatives, to focus on alternative energy and to include in our program design an assessment of environmental impact.

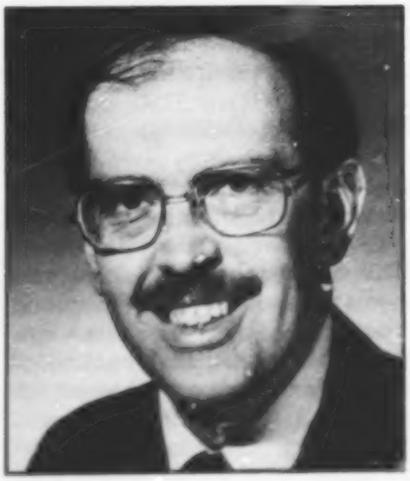
And we have led in the design of programs that recognize and take advantage of the role of the private sector—whether in family planning and health or in food production and distribution. □

Frederick Schieck is Acting Assistant Administrator for AID's Asia Bureau. His remarks are adapted from testimony before Congress in March.

AMERICA:
Continuing a Proud Tradition of Helping Others

> Development assistance also protects U.S. interests abroad.

A statement by
AID Administrator
M. Peter McPherson



Developing countries have made much progress in the 30 years or so since their modern, independent economic growth began and since the United States first launched the concept of large-scale international development assistance. Our satisfaction at these accomplishments must be tempered, however, with concern over today's problems and those of the rest of this century.

Over the past 30 years the economies of developing countries grew faster than the industrial nations had ever grown in any comparable period. At the same time, life expectancy—a useful index of a country's health and general living standard—rose from 32 years (just before World War II) to 50 years, an increase that took the industrial countries the entire 19th century to achieve. Adult literacy rose from one-third in 1950 to about one-half by 1975, while the number of students in primary school more than tripled.

Substantial progress has been made toward economic self-reliance and diversification. In the early 1950 many of the countries that have achieved these advances were just emerging from colonial status, were torn by unrest or open warfare, were dependent upon one or two commodities for the bulk of their exports, and had barely begun to create the educational, research and governmental institutions on which modern development depends.

The United States can be proud of the contributions we made to this historically unprecedented record of economic and social advancement. The United States was at the forefront of the industrial nations in recognizing the need for international economic and technical assistance to the developing countries, in creating programs to provide such assistance, in urging other industrialized countries to increase their aid efforts, in promoting the expansion of the burden-sharing multilateral assistance agencies. Private U.S. investment in developing countries has been encouraged and the system of international trade strengthened in recognition of the opportunities trade can offer as an engine of growth, especially for market-oriented economies.

This progress has also brought home to us the reality of problems that persist and affect us all ever more directly. We have learned that continued progress in Third World development is of growing importance to our own domestic and international well-being.

In the past year public awareness of our interdependence has been highlighted by the President's Hunger Commission, the Brandt Commission, and the Global 2000 study. The Global 2000 report in particular presents a sobering picture of large-scale interrelated problems caused by population growth, energy scarcity, forest destruction with attendant soil and atmospheric effects, and pressure on food production capacity. The Hunger Commission focused on food production and effective demand for food, the constraints on growth, and the implications for development assistance and for the already vast numbers of hungry human beings in the poorer countries. The Brandt Commission stressed the wider framework of economic policies and institutions and the need to strengthen these policies

"This Administration is committed to finding practical means of enhancing the private sector's role in assistance programs . . ."

and institutions if we are to have a chance of meeting the problems of the next two decades as effectively as we have the previous three.

Future directions in all these areas, and in the progress generally of the developing countries, will have direct impact on the well-being of the United States. The entire planet's ability to sustain greatly increased numbers of people, to control atmospheric pollution, to produce sufficient energy and to reduce stark disparities in income levels and employment opportunities that lead to heavy pressures to migrate to stronger economies will depend on the rate of economic progress in the developing countries and the extent to which this progress is shared among the entire population. Failure to make acceptable progress in ameliorating conditions of poverty can only lead to domestic instability and increasing frustration on the part of Third World governments over the workings of the international system and the distribution of economic and institutional power in that system as it is now constituted. Such instabilities, as we know all too well, can quickly spill over into regional disequilibrium and create opportunities for interventions that are to the interest neither of the countries directly involved nor to ourselves.

The decision to provide aid to a country is, of course, a key foreign policy decision. Successive Congresses and Administrations, beginning with Roosevelt and Truman and continuing with President Reagan, have recognized the importance to our foreign policy of a strong, broadly based foreign assistance program. The balance has fluctuated over the years between military and economic aid and between the meeting of short or longer term objectives, but at no time have we lost sight of the tremendous importance such resources have to our overall national security interests. There is no doubt that this Administration shall continue to stress the importance of substantial development assistance to helping achieve our national objectives.

Technical and economic assistance needs vary from country to country, as do the degrees and kinds of U.S. interests; as a result, the array of programs we conduct or help finance is also quite varied.

The total FY 1982 request for all foreign economic and financial assistance is $8.1 billion, a reduction of $1.5 billion from the Carter budget. This request represents slightly more than 1% of the entire federal budget.

Bilateral Programs

Approximately 80% of the FY 1982 request is allocated on a bilateral basis. The major bilateral programs are:

1. **AID Development Assistance ($1.9 billion)** concentrates on programs pinpointed to areas of special concern to the United States—*e.g.*, the Caribbean—that draw on our comparative advantages and special priorities—as in technology transfer, use of the private sector, and support for equitable growth in a limited number of priority sectors.

2. **The Economic Support Fund ($2.6 billion)** promotes economic and political stability where the U.S. has special security interests. These funds, while directed more explicitly to political objectives, are very important to achieving economic development objectives. Budgetary increases this year are directed especially to helping meet urgent foreign policy priorities in Central America, while providing for enhanced flexibility (in close consultation with Congress) to meet ever-changing special requirements as they develop throughout the year.

3. **PL 480 Food for Peace ($1.2 billion, about 5.5 million tons)**. PL 480 provides Third World countries with food supplies to meet national food and nutritional needs while they increase their own food production. As we integrate development programs more effectively, one of my major goals will be the enhanced link between food aid and our other development acitivities.

4. **Refugee Assistance ($568 million)** represents a very substantial U.S. program designed to alleviate the misery and suffering now found with increasing severity worldwide. During 1980, major refugee relief programs were supported in Kampuchea, Somalia, Pakistan and Zimbabwe. This aid provided immediate survival support followed by supplies of tools, seeds and shelter in order to permit refugees to become self-sustaining, either in a foreign land or within their own borders.

5. **Housing Guarentees ($150 million in guarantees, no appropriation required)** are designed to provide shelter and associated urban services to low income families. Efforts related to Housing Guarantee now include technical assistance for institution building and helping countries prepare medium-to-long term shelter development plans.

6. **The Peace Corps ($95 million)** fields about 6,000 volunteers in over 60 developing countries. Volunteers now carry out important development assignments in key basic human needs areas. Increasingly, AID and the Peace Corps are cooperating on joint ven-

"Future directions . . . and the progress generally of the developing countries will have a direct impact on the well-being of the United States."

tures of common interest.

7. **Other** bilateral activities include the Inter-American Foundation ($13 million proposed in FY 1982) which extends grants to local private groups in the Caribbean and Latin America.

Multilateral Programs

About 20% of this request is for international development institutions, especially the multilateral development banks (MDBs). The international character and varied financing windows of the MDBs make them especially able to work on difficult policy issues and to fund large development infrastructure projects that directly increase the productivity of poor people in countries of significant importance to the U.S. These projects often complement U.S. bilateral programs, an effort we shall try to strengthen. These banks generate about three dollars from other donors for every dollar we provide, as well as much larger flows in support of development by the banks' borrowings from the private banking system.

Private Investment

This Administration is committed to finding practical means of enhancing the private sector's role in assistance programs and in LDC development, both in the programs noted above and in two special organizations in our bilateral program:

1. The financially self-sufficient Overseas Private Investment Corp. (OPIC) provides political risk insurance and loan guarantees to U.S. investors in new or expanding businesses in developing countries.

2. The Trade and Development Program (TDP) ($7 million, FY 1982 budget request), promotes private sector participation in Third World development through the provision of project planning services that lead to the sale of U.S. technology for project implementation and through the provision of government-sponsored assistance on a reimbursable basis. Directed principally at middle-income countries that can finance their own development, it complements development assistance programs which focus on the poorer countries. . . .

More than half of the AID's development assistance budget is focused on food related problems. Increasing food production distribution and consumption within a growth with equity strategy is a primary goal.

In FY 82, $727.8 million is requested for this sector. AID's farm level efforts to increase food production are varied. Through training, technical assistance and financial support, AID will foster the improvements needed to increase the production of the family farmers. Our focus on the total farming system offers a promising approach to research and development of technologies most useful to farmers. Through additional research —in U.S. universities, in international agricultural research centers and in the growing national research establishments in low income countries—AID intends to stimulate the continued development and dissemination of improved agricultural technologies.

The agricultural production policies of recipient countries are also critical. We have two major instruments for influencing policy. First, through technical and capital assistance we help reduce policy and related institutional impediments to equitable growth. Second, by providing PL 480 food aid in the context of a long-term agricultural development plan, we encourage policy changes to reduce food deficits while addressing the worst immediate aspects of such shortages on the needy.

The grave implications of a related problem, accelerated deforestation, are upon us. This is a threat both to rural energy needs and to agricultural productivity. Forests are being cut for fuelwood at a rate faster than the process of natural regrowth. Consequently, erosion is increasing and the resulting siltation reduces streamflow, increases flooding and affects the utilization and maintenance of irrigation systems. Adequate supplies of potable water are equally threatened. Forestry assistance is now a key element of AID's program, as is our assistance to help developing countries manage their natural resources more efficiently and productively.

Deforestation has itself been accelerated by the worldwide fossil fuel energy crisis. With the upward spiral in the price of petroleum-based fuels, the pressure on fuelwood supplies has intensified. AID is therefore giving increased emphasis to the development and diffusion of alternative rural energy sources such as bio-gas and mini-hydro, as well as more efficient energy conversion devices, such as wood-burning stoves. We are also strengthening institutions for energy planning and policy analysis. Over $77 million is sought for all types of energy programs in FY 82.

Rapid population growth in developing countries exacerbates food, environment and energy problems. Between 1980 and the year 2000, the world's population is expected to increase about 4½ billion to over 5 billion people; 90% of that increase will take place in the developing countries. While the demographic situa-

"There is no doubt that this Administration shall continue to stress . . . development assistance to help achieve our national objectives."

tion is serious, it is not hopeless. Worldwide population growth rates are no longer rising. Among the 13 most populous developing countries, all have experienced crude birthrate declines. However, significant countries and regions of the developing world are still growing at rapid rates that offset development gains and contribute to local and global instability.

As the largest donor for international population programs, the United States has played an important part in bringing about decreased population growth rates. We have led in developing and disseminating the most widely used contraceptive methods; in providing contraceptives; in developing inexpensive service delivery systems; in training personnel; and in increasing motivation for family planning among individuals, communities and national leaders.

We must continue to assert our leadership. Today, demand for population programs far exceeds available resources. Our funding request of $253.4 million for population programs is essential to keep up the momentum in the highest priority program areas.

Illness and early death are still common among the poor in developing countries. Primary health care, a combination of the most basic preventive and curative health services, is among the most promising means of reducing childhood disease and death, of diminishing poor hygiene and related poor nutrition, as well as the often fatal effects of too frequent pregnancies. Most developing nations have made a firm commitment to primary health care and many look forward to the extremely ambitious goal of universal access to primary health care by the end of the century.

AID has been a leader in financing primary health care programs since the early 1970s and has helped finance nearly 50 programs in 36 countries. Part of the challenge before us is to help developing countries establish systems that can be self-sustained through government efforts and participation of local communities. We are requesting $120.4 million in FY 1982 to meet the challenge and carry on other priority work in the health sector.

The education problems that developing countries face are enormous. Indeed, because of the rapid growth of the youthful population and the acute shortages of teachers and instructional material, developing countries face the very real prospect of having more school-age children out of school in 1985 than a decade earlier. Our strategy is to help developing countries find cost-effective ways of improving their basic educational programs.

AID also focuses on critical higher-level manpower shortages that undermine economic progress in the developing world. AID has supported the training of over 200,000 professionals in a wide range of fields critical to development. I am personally concerned that AID's participant training program has declined in the last decade, notwithstanding continuing high demand for American university and specialized training.

In order to help meet these education and training needs, we are requesting $109.6 million for FY 82, primarily for programs in Latin America and Africa. The bulk of these funds will be used to support programs for basic primary and non-formal education as well as vocational, technical and professional training.

The $1.9 billion AID has requested for the Development Assistance program is nearly half a billion less than was proposed in the Carter budget. This cut does not represent a reduction in need for funding of agriculture, health, population and other programs around the world. Rather it represents the outcome of a difficult set of choices in which this Administration has had to give very high priority to reaching an appropriate balance between income and expenditures, a process in which every budget had to be scrutinized and virtually every program had to be restrained no matter how sound the objectives.

As we reviewed the previous budget, I came to realize how central our Development Assistance program is to America's relations with countries around the world. Indeed, for many countries the Development Assistance program is our primary expression of participation in what for them is most important—their rapid economic and social development. Thus, this program serves not only our generalized interests in helping to solve some of the world's most critical problems, but also our very immediate political interests in achieving a satisfactory relationship with countries important to us on the three major continents where the program is carried out.

This is a worldwide program, focused on a critical set of development issues—food, population, health, education and energy. It serves our foreign policy interests well, and will leave a lasting impact on vast number of poor people. ☐

M. Peter McPherson is the Administrator for the U.S. Agency for International Development. His remarks were part of testimony before Congress in March.

WHAT THE MEDIA SAY...

Many countries are too poor to be credit-worthy to the commercial banks and it would be shortsighted for the United States to compound their problems by denying official aid as well . . . This is the role for concessional aid. Call it a grubstake. Call it national security. It is the only economic instrument the United States has in many countries. This aid need not be given indiscriminately to all comers. If countries will not help themselves, there is no place for U.S. aid other than to lease allies for short periods. . . . When countries are prepared to help themselves, it would be folly to withhold our assistance. . . . Those who oppose such a program are taking risks with U.S. national security.

—Sidney Weintraub
Christian Science Monitor

The remedy (for recurring African famines) lies in building on, rather than draining the great strengths of Africa's village civilization. The effort to build stable nation-states and prosperous industrial economies on the narrow base of raw materials produced for export, introduced in the colonial period for a no more exalted purpose than deriving a profit for empire, has proved beneficial to some Africans and non-Africans alike. But obliging Africa's villages to produce first for the consumption of others has undermined the very village self-sufficiency on which the exploitive status quo depends. Let there be no mistake about the risk. In Africa's future, there may indeed be a failure of food production for local consumption. The consequences would be horrific. Any relief program would be overwhelmed. Millions would die in weeks. My guess is that they would go silently to their graves. Then, at least, the problem of hunger in Africa would be solved.

—James Harkin
New York Times

The North-South meeting, planned for late October after more than a year of diplomacy, is expected to be the first occasion when President Reagan tells other world leaders in detail how the United States envisages Western economic cooperation with developing countries. Nominally a question of economics, development policy actually affects Washington's overall relations with its allies, the Third World and the oil-exporting countries. . . . Some European leaders, who acknowledge privately that the U.N.-sponsored global negotiations have bogged down, share many of Washington's views. In Britain, Prime Minister Margaret Thatcher's government insists that it will no longer listen to demands for assistance based on a colonial past. France, 85% of whose aid is bilateral, has always preferred helping its clients directly rather than through international organizations. West Germany prefers to direct its aid to regions it considers vital to European security. . . . The Mexico summit meeting should be a format for Reagan to explain his ideas and perhaps agree to adjustments.

—Joseph Fitchett
Washington Post

As long as the United States had nuclear superiority over the USSR it did not have to use any weapon blatantly to keep other nations in line. That superiority having disappeared, aid, food, human rights, interference and subversion are now built-in elements of foreign policy. Mercifully the temptation to use lethal weapons, in particular nuclear arms, has been checked by the "balance of terror." Armaments are messy anyway; food gives you a kill—without a drop of blood.

—South magazine
London, England

The time is favorable for a reasoned, thoughtful public discussion of foreign assistance. Bureaucratic squabbles, personal power plays, and overheated ideological rhetoric, whether from hard-nosed laissez-faire conservatives or moralizing progressives, is out of place. A strategy compatible with market principles, yet tempered by genuine humanitarian sympathy—a free market with a conscience—represents the prudent choice to which the Reagan Administration should incline.

—James O'Leary
New York Times

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LATIN AMERICA: ON THE EDGE

DEVELOPMENT UPDATE

The Prime Minister of Canada on the Third World: Speaking before the Canadian Parliament, during the visit of President Reagan, Pierre Trudeau said: "As to North and South, we are not dismayed by the complexity of the problems. The poverty of the developing countries does not have to be permanent, nor is it unalloyed. The gap between the two groups is neither racial nor unbridgeable. In the growth of the oil-producing states, in the vigor of the newly industrialized countries, there is convincing evidence of the dynamism and potential of the developing world. In the unity of the South there's not so much an identity of circumstances as an idea, a point of view, a shared sense of injustice. The poorer peoples are at the mercy of circumstances that leave them out of balance, often out of hope, and too often vulnerable to opportunists who come poaching in troubled waters. The industrialized democracies have not only a human duty but a strategic obligation to help developing countries in their struggle, their survival and their success."

Bug Bites Bug: Scientists are researching a new method of insect pest eradication called biological control in Africa, reports the Canadian International Development Research Center. A crop pest's natural insect enemies are introduced into a field, thus holding the pest in check and avoiding the hazards and defects of chemical pesticides. Dr. Fred D. Bennet, director of the Commonwealth Institute of Biological Control in Curepe, Trinidad, has been focusing on research on the green spider mite, which is blamed for the loss of up to half of the cassava crop in East Africa. Cassava is an important staple food. In some areas it serves as a famine crop to ensure survival when the local staple fails. Scientists indicate that biological control has great potential, but concede that it is a tricky business. "There are no hard-and-fast rules to apply since many variables must be considered, such as geographical location and the pest to be controlled. Also, the methods may take years to become fully effective."

India's Technology Dilemma: India's printing and publishing industry is on the verge of a large scale modernization program, reports Rex Winsbury in the World Press Review. The modernization may bring a rich export market, but it also promises to test the "appropriateness" of sophisticated technology for the Third World. The challenge to India, writes Winsbury, is to adapt Western technology and its economics so that jobs are preserved rather than reduced. If the effort fails, he suggests, it may simply drive the cost of publications beyond the reach of the average Indian, thus denying the press a role in India's further development. If it succeeds, he says, it will have lessons for everyone concerned with technology transfer between developed and developing countries.

"The Troubled Third World" has become the market for mounting arms exports. According to the U.S. Arms Control and Disarmament Agency, the developing countries imported over $16 billion of military equipment in 1978. Worldwide arms trade totalled more than $20 billion in the same year. The United States exported more than $7 billion of military equipment to the Third World in 1978.

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Many farmers in Peru are faced with making land like this produce crops.

LATIN AMERICA: On The Edge

The region, so important to U.S. interests, teeters between progress and collapse, peace and chaos.

Latin America, our troubled, and troubling, neighbors to the south. How important are they to the United States? Is the $405.5 million in U.S. economic assistance proposed for FY 1982 justified and, if so, in what terms?

The following articles focus on three Latin American countries and the U.S. assistance effort in each. Peru, Honduras and Costa Rica offer a sampling of the major problems facing most countries in South and Central America and the Caribbean. Each is important to U.S. national security, political and economic interests, as are most of the others in the region.

In general:

- Latin America constitutes the third largest market for U.S. goods, after Western Europe and Canada. That amounted to more than $35 billion of U.S. sales abroad in 1980.
- Seventy-seven percent of U.S. direct and financial investment abroad is in the Latin American and Caribbean region.
- Exports account for one out of every eight or nine U.S. manufacturing jobs.

The situation today is this. Latin American nations are experiencing severe balance-of-payments problems. These are due largely to the rise in petroleum prices and the decline in coffee, cacao and now sugar prices, as well as to escalating debt repayment obligations. With increasingly limited resources, it is very likely that some Latin American countries will not buy as much from the United States this year or next as they have in the past. And that in turn may mean more Americans will lose jobs that are directly related to exports.

From a security standpoint, the Latin American countries, particularly those in Central America and the Caribbean, offer an all-too-attractive berth for anti-American powers. Maintaining close ties with allies in Latin America may help to slow the spread of communism. Right now vital sea lanes used to transport goods to and from Latin America and oil from Venezuela and Mexico are open. It is important that political clashes not close them.

What causes upheavals of the kind that El Salvador is now going through? Poverty is certainly a major player behind the scenes, and poverty persists throughout much of Latin America and the Caribbean. For example, for many people in Latin America a job is the only hope for survival. Yet unemployment is on the rise almost everywhere. Already it is up to 20-30% in much of the Caribbean and El Salvador. In

Panama the figure is still close to 15%. An equally high percentage of working men and women are underemployed—trapped in jobs that go nowhere and pay very little.

More and more people are being born into this bleak existence. The population growth rate, although down to 2.4% for 1975-79 from 2.8% for 1960-65, still promises to deliver a total population of 600 million in just the next 20 years. There are just over 77 million people now.

In direct proportion, the number of people looking for work will continue to go up. The International Labor Organization projects there will be 200 million workers in the year 2000, more than double the number today. Half of them will not find jobs or will be underemployed.

Meanwhile, the land's failure to support the great weight of such swelling numbers of people, coupled with worsening economies in general, is forcing thousands of desperate people to flee their dried-up farms for already overpopulated, overburdened cities. Drawing them is the weak-but-steady hope of a better life, if not for themselves, at least for their children.

Despite incredible odds, that hope sometimes comes to pass. For example, in Lima, Peru, where the dusty, barren hillsides around the city are blanketed with the straw and cardboard dwellings of some 3 million people, a man, age 40, looks for work in the city. He is told repeatedly that he is too old to work. His family, so recently uprooted from the sierra (highland plateaus), has little to eat; their home is no more than a hut six-feet-square without water except for that delivered at exorbitantly high prices. Yet the children go to school, and sometimes they work after school in factories or selling wares on the street. If they get sick, the chances for at least some medical care are good. So, like many others in these new towns or *pueblos jovenes*, this man will tell anyone who asks, "Life is better here."

The U.N. Economic Commission for Latin America estimates that at least half the rural people live in poverty—as they have lived for generations. Binding them in an enduring pattern of hopelessness are many forces, some climatic and beyond their control; others caused in part by their own actions. For instance, Latin America as a whole depends on agricultural production for subsistence, yet soil erosion is stripping the farmland of the essential nutrients for crops. Soil erosion is most often the direct result of burning off hillside timber, and burning is the age-old way to clear more fields for

Built with AID funds, this structure will house a vocational school for Honduran youth.

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farming. Called slash-and-burn, this traditional clearing method is practical and fast and can be accomplished in areas where it would be impossible to bring in tractors and plows or harrows and the like. It is the way it has always been done. To change it, farmers must learn new and better ways, and the reasons they are better. Impeding this educational process are the inability to obtain sufficient land, a basic lack of education and recurring, debilitating poor health. Ironically, poor health is often the result of not having enough good food to eat.

That these conditions have not changed a great deal over time for most people in Latin America is often less a reflection of the governments' lack of interest than their lack of resources. Helping people takes money and manpower—to build roads and schools, to provide teaching, medical care and agricultural extension services. Most countries have too little of either. Despite the signs of progress in many major cities offered by bustling industries and crowded streets, shopping areas and ports, there is growing concern everywhere. For one thing, many of the ships in port carry oil, desperately needed but at high cost, or raw materials, which also have become expensive.

With less and less cash and now diminishing credit, many Latin countries can afford to provide fewer and fewer services for their people.

Central America today is in a state of upheaval. The misery of the poor in El Salvador has reached a new level with killings that occur daily. Rumblings of unrest are being felt in neighboring Honduras and even in parts of Costa Rica, the longtime stronghold of democracy.

To combat deforestation, a major problem in Peru's highlands, AID is supporting forestry programs.

The Caribbean: where a relatively stable nation, the Dominican Republic, shares the island of Hispaniola with Haiti, best known for the exodus of thousands of its people. Where another island nation, Jamaica, is today limping back from the brink of financial and social collapse. Its fragile economy is largely dependent on forces it cannot control: high oil prices, low prices for bauxite, its chief export, and the vagaries of tourism.

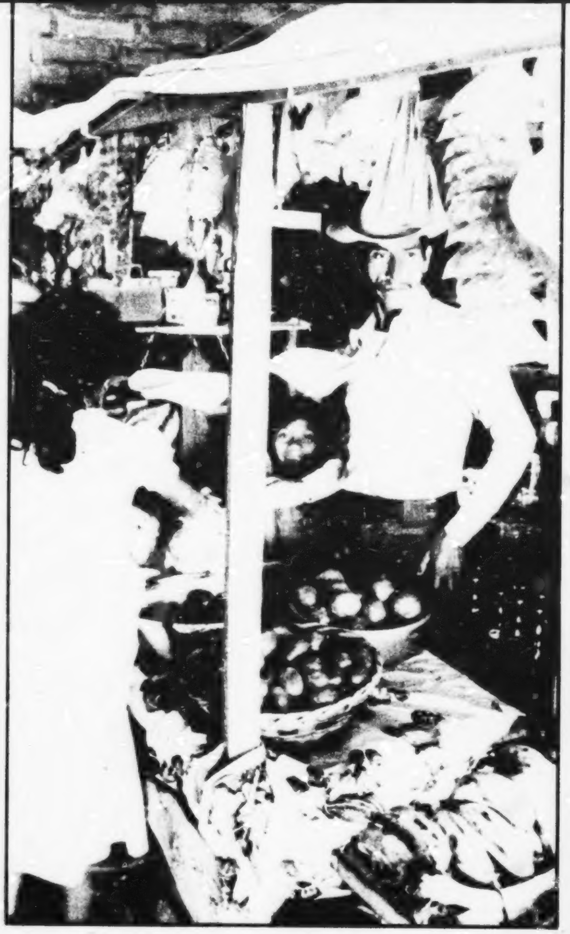
In 1980 there were coups in Nicaragua, Suriname and Bolivia and in 1979 one in Grenada. This year there has been another attempt to overthrow the government of Bolivia, and there is violence in Guatemala and El Salvador.

The United States is one of several international donors helping Latin American countries pursue progress in peace. The United States is working with their governments to help develop policies for equitable growth and effective administration. U.S. efforts are complimented by the work of private voluntary organizations, such as CARE, Catholic Relief Services, Save the Children, and others.

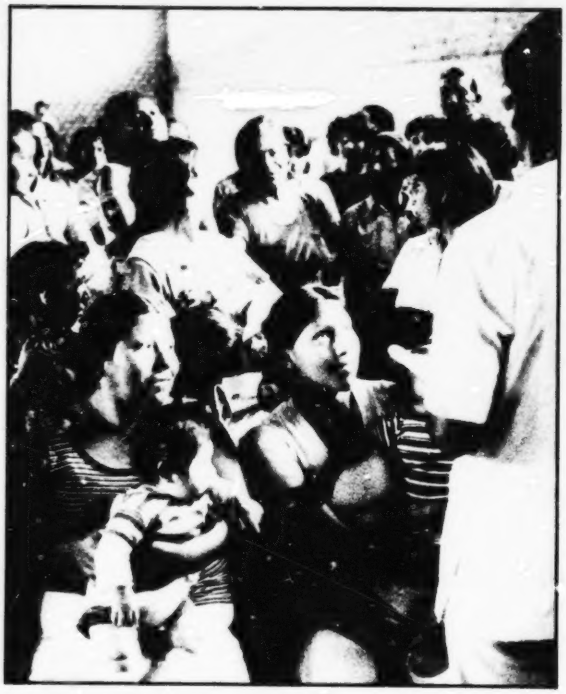
The primary focus of U.S. development assistance is on agriculture and rural development. But at the same time cities near the bursting point are not being ignored. Programs have been started to help provide basic services to people in *pueblos jovenes* and their counterparts elsewhere and to make credit available to people who want to start their own tiny businesses.

To provide jobs for the increasing work force will require a strong and expanding private sector. It is very much in the U.S. interest to assist in this effort.

Until countries like Peru, Costa Rica and Honduras can afford to both manage their economies and provide much needed services to their poor, it is clear that they will need a hand from the industrialized world. At present most Latin Americans prefer that it come from the West. ☐



LATIN AMERICA



The isolation of Peru's highlands and the steady flow of its people into cities; Honduras' need to step up farm production and ease poverty; Costa Rica's growing difficulty in meeting human needs while dealing with a worsening economy . . . all reflect the complex problems facing many Latin American countries today.

PERU:
Behind the Facade

Barren land and hardship represent the "real" Peru for most of its poor.

Against a moonscape backdrop, Emilio Baneros Chalon sifts a handful of growing soil through his fingers. In seeming mockery of the desolation around him, he coaxes crops out of once-barren ground. To do so, Baneros—and 19 other farmers working with him on this communal farm—have called upon the experience of the ancients: They are rehabilitating Incan irrigation canals, evidence that hundreds of years ago, others farmed here, too. The rows and rows of corn and beans now are sweet reward for the sweat and blood determination that was born out of the desperation of these present-day tillers. All have migrated to this rural area outside the coastal city of Trujillo. Their land is a gift of the government's land reform, a deliverance from starvation. They must make it grow.

In darkness they move quickly, throwing together woven screens and sticks, building houses and making a community out of a garbage dump. At dawn they present a united front before the brigade of trucks arriving to feed the pile of trash these "invaders" already have cleared. It takes months, but the band of 150 families succeeds in officially establishing one more waterless, roadless, sewerless *pueblo joven* a new town on the fringes of Peru's capital city, Lima.

Up the mountain trail climbs the Quechua woman, descendant of the proud Incans, bending low beneath the firewood she carries on her back. She holds her burden close, wrapped in a woolen shawl. It is noon; by nightfall she and her flock of children, some with the distended bellies and orange-colored hair of severe malnutrition, will reach their dirt-floor, thatched-roof home miles above Cajamarca in the Andean highlands.

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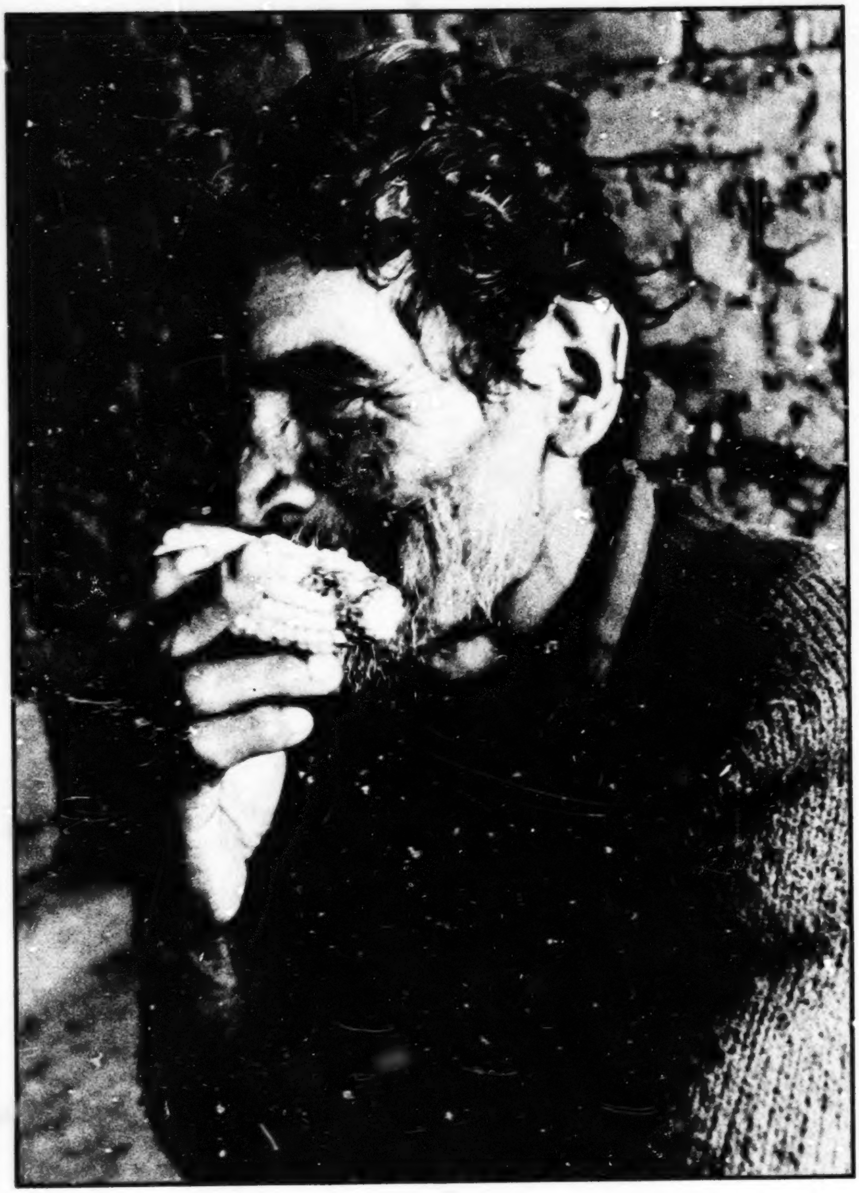


Not the Peru of travel posters depicting majestic Incan ruins, towering, lush mountains and colorful well-clothed, Indian people. Machu Picchu exists, the ruins are as imposing as they appear in slick four-color. But behind that facade, live most of Peru's 18 million people, caught in a perennial struggle to survive.

About half of Peru's children, like those of the Quechuan woman, are malnourished. The 4.5 million people living in the southern sierra (highland plateau region), the rural part of the central sierra and in the selva (jungle), suffer the worst cases. There are not enough cereals, vegetables, milk, eggs and fats to eat. The situation has been aggravated in recent years by stagnant agricultural production, steady and high increases in population and just as steady decreases in real incomes.

Peru's health problems are more severe than the Latin American average. Nearly half of all deaths occur in children under age 5, and more than half of those children succumb to diseases related to malnutrition. Nationwide, 172 out of 1,000 children die before age 2. In the sierra, the rate is higher: 300 in 1,000 children under 2 die.

The average Peruvian can expect to live to age 52. But not in the poorest areas of the countryside: In 83 of 150 provinces the average lifespan is less than 50 years, and in 14 provinces it is less than 40.

While there are almost six doctors

for 1,000 people on a national scale, 70% of all qualified medical personnel are in Lima. Less than one-third are stationed outside cities; thus, 6.2 million people cannot obtain medical care. Nationally there are only about two hospital beds for 1,000 people. But again, Lima claims half of them. This means that there are about four beds per 1,000 people living in Lima, but not even one bed for 1,000 living in Puno, for example. The government has attempted to provide medical centers, but the facilities are not well-equipped and do not yet even cover half of the rural districts. The United States recently stepped in to help extend health services.

The number of children who can go to school—at least at elementary levels—is impressive for Latin America—85%. But once again, the majority of those schoolchildren live in the cities. While almost three-quarters of all people who are over age 14 and live in the cities can read and write, less than half their country counterparts have the same skills. Over 3 million Peruvians do not speak Spanish. Most are Quechua. They live in the sierra and highlands in absolute poverty at the bottom of the social ladder, their poverty and deprivation a matter of historical fact.

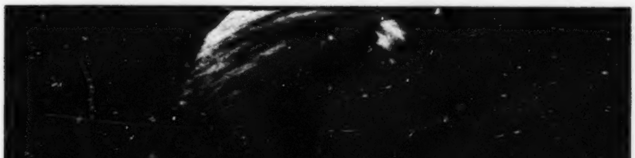
The future would seem to hold little for the Quechua woman of Cajamarca and her family. But the needs of those like her do not go unnoticed. Private voluntary agencies such as Caritas (Catholic Relief Services), CARE and others, often with funding from AID, are working with the government to help provide health care and classes as well as nutrition instruction and feeding programs. In addition, U.S. assistance is directed toward food-for-work programs, help is obtaining credit for small businesses, and support for cooperatives.

Life is generally hardest for the rural women. On the road in the countryside it is common to see her husband on horseback leading the way to home or market, while she trudges along on foot behind him, laden with wood, food or supplies.

On the smallest farms, which produce only barely enough for a family to eat, the man must often find work elsewhere. In his absence, the woman plows, plants, harvests and markets, all the while caring for children and livestock. In the cities life is sometimes easier for women. At

Mothers and children in some pueblos jovenes receive care in AID-supported health clinics.

Feeding programs provide the day's only nutritional meal for many children in the pueblos jovenes.



least there they have a chance for both education and jobs.

But available jobs are drying up, in the countryside and cities alike. The number of people able to hold jobs has been growing by 150,000 a year. The World Bank has projected that by 1990 there will be as many as 227,000 workers added to the existing labor force each year. Of course, hardest hit by unemployment, will be those living in the countryside.

Why are Peru's rural people so poor? Some earn less than $70 a year. The answer lies in the combined effect of the country's high birth rate—almost 4% in 1979—limited resource base and the isolation of the sierra. That isolation is physical, economic and institutional. The land is harsh and will allow little to grow. What is grown is difficult to sell; the markets are along the coast, hundreds of miles away over poor, sometimes impassable roads. Such isolation also makes it difficult for the government to get help to the poor.

There are several categories of farmers in the agricultural production regions. Their station differentiates their ability to earn a living.

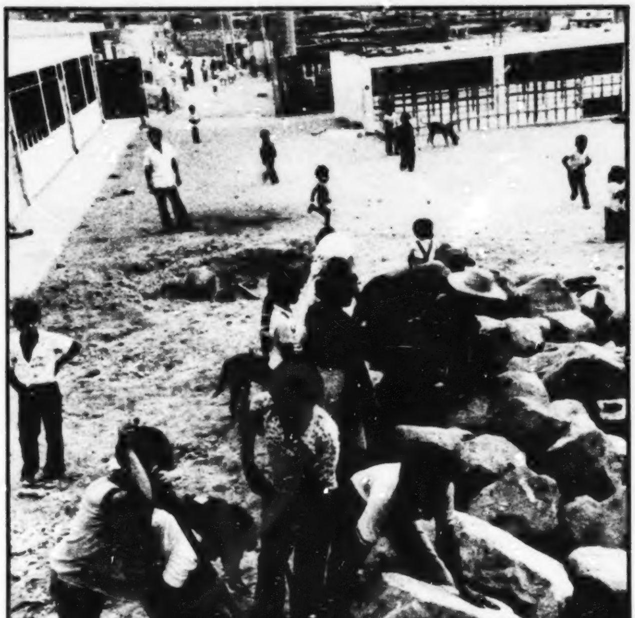
Independent market-oriented farmers have the ability to sell a significant portion of their crops at local markets. Their farms are generally between two and five hectares (one hectare = 2.5 acres). There are about 263,000 families in this group throughout Peru; more than half are in the sierra.

Land reform has changed the lives of many people in Peru as it has in other Latin American countries. It is the government's attempt to deal with one of the strongest barriers to improving the lot of so many poor people. In the past too many thousands of acres of good farm land rested in the hands of too few, the rich. Today in Peru about 170,000 farmers belong to group-farming entities similar to Emilio Baneros' set up during the Agrarian Reform of the last 12 years. Most of these "associative enterprises" cultivate common land (the old haciendas) which produces crops and livestock for sale. Within each farm group, each family owns and cultivates a small plot for the household. The yield of the rest is jointly marketed.

It is a good arrangement, on paper. But in the sierra especially, most of these farms are not productive and living conditions are poor for the approximately 80,000 families involved.

To relieve the hardship that Baneros and his partners share with so many other farmers, the government is, with AID assistance, making credit available to them through major banks. With small loans, the groups can buy fertilizer and seed, and other supplies they need.

A food-for-work program is helping these new arrivals to Lima clear what will be a schoolyard.



Irrigation is the key to growing crops in barren ground, as Emilio Baneros has discovered.

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Through a special AID fund (totaling $100,000) a group like Baneros' also might be eligible for a one-time $5,000 grant for a special project.

The last category is made up of *comuneros* or campesino community and group members who are what is left of pre-Columbian villages. The *comuneros* carry on the ancient system under which pastureland was communally held while cropland was subdivided for individual use. Although there are more than 1,000 *comuneros* with more than 420,000 families (about 2.4 million people), only a fraction have been legally recognized under land reform.

While life is difficult for many or most farmers particularly in the sierra, it is far worse for the more than 430,000 families who either own no land, or too little. Most of them search for jobs that are especially scarce in the rural areas. As economic conditions worsen, more and more of these people are pulling up stakes and heading for the cities along Peru's 1,500 mile-long coast. These cities are filling up faster than the government can provide services for the people arriving. Substandard housing and limited employment opportunities for ill-prepared migrants have resulted in continued poverty for a conservatively estimated 2.5 million people.

That the government is having difficulty keeping up with the flow and providing public services in many of the *pueblos jovenes* stretching for miles along the outskirts of the cities, imposes a double penalty on the poor. For example, the unit cost of a cylinder of water in a Lima *pueblo joven* provided by dirty, dilapidated, leaking trucks run by private businessmen, is 16.7 times higher than the same amount of publicly provided running water. The cost of a candle is three times higher than the equivalent amount of electricity. And kerosene is still higher. The result is entrapment for many; for others, it means being driven further into poverty.

Yet as each newly arriving group succeeds in obtaining recognition from the government as a *pueblo joven*, it becomes eligible for the services that eventually do come. In the meantime, the government and international donors such as AID are working with private voluntary agencies to meet the most serious human problems. Thus among the 150 families who have transformed a garbage dump into a town, many may soon find temporary employment in a food-for-work project such as the one now run nearby by CARE with AID and government funding; health care as now provided through a health center in another town by

Irrigation projects such as this one in Cajamarca will help open new land for farming.

OFASA (Seventh Day Adventists); or lunches for their children as now offered elsewhere through Caritas.

The overall economic condition of the country has had an effect on the absolute poor. Saddled with a skyrocketing rate of inflation (now 67%), Peru recently devalued its currency and increased prices. The recession that began in 1977 was brought about by external account deterioration—a decline of bank system net internal reserves amounting to $1,718 million for 1974 to 1978, and accelerating external debt, from $5,569 million in 1974 to $8,839 million in 1978. So far, three stabilization programs have been tried; the country has been on the brink of default; and there have been widespread workers' strikes (the most recent in January).

There is cause for optimism, however.

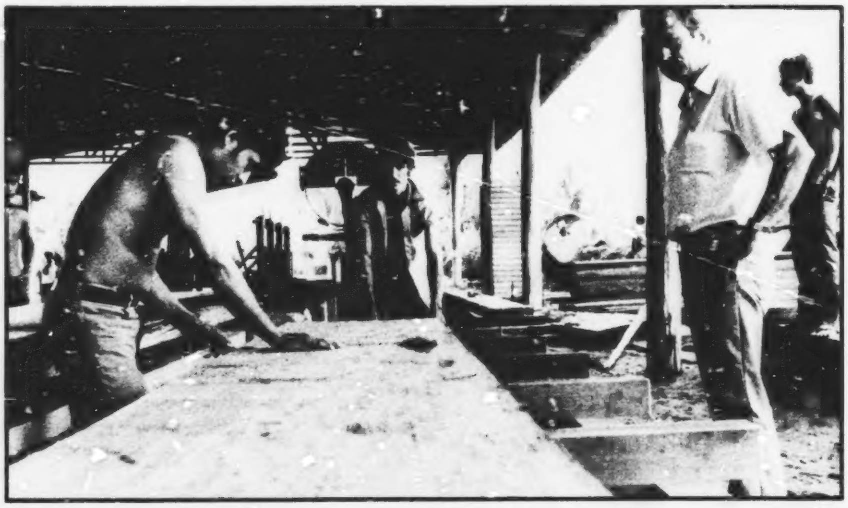
After 12 years of military rule, the government is now in the hands of a popularly elected president, Belaunde Terry, a man committed to development, according to U.S. AID officials in Peru. Belaunde's recovery plan contains many elements, some derived from previous efforts, the land reform movement for example. Many will depend in some measure on support from the United States and other international donors.

For the immediate future, the president will be facing the necessity of forming policies which will provide for jobs and raise incomes—now at all-time lows—for the poor in the cities. The inflation rate must come down; the recent price increase was an attempt to bring that about.

Looking further down the road, the government must develop alternative sources of energy—a task it shares with much of the rest of the world. Peru's proven petroleum reserves, about 715 million barrels, will meet domestic demand for only about 10 more years, the experts say. Peru will have to begin importing in 1984, if no other finds are made. In the

Cleaning up at the family business in Cajamarca.

Protecting nursery seedlings with bamboo screens is preliminary to transplanting outside.



This sawmill is one of several fast-growing small businesses in Tarapoto.

Using bank credit made possible through an AID program, this farmer is building a new ba

meantime the government is launching, with a portion of $10 million in U.S. assistance slated for energy, a long-term program to develop its hydroelectric potential. And over time, international support will be needed to improve the structure of the country's external debt.

U.S. assistance over the next few years will be directed toward helping the government form needed policies and develop institutional capabilities, and toward filling the gap between Peru's commitment to the poor and its still weak fiscal position. The actions Peru has taken to restore economic growth have at least for the short run diminished its ability to carry out social programs.

AID's strategy is to continue to work with the government and private voluntary agencies and others to support efforts in health, family planning, education and nutrition primarily for the 6 million inhabitants of the poorest region, the sierra. At the same time, AID will support efforts to increase agricultural production in the high jungle and the sierra, and provide for programs to meet the basic human needs of the urban poor, especially those flooding into coastal cities.

Belaunde is firmly dedicated to human rights, growth with equity and promotion of strong trade and investment ties. The president also is redirecting Peru's policies from a planned to a more market-oriented economy which encourages both private and foreign investments.

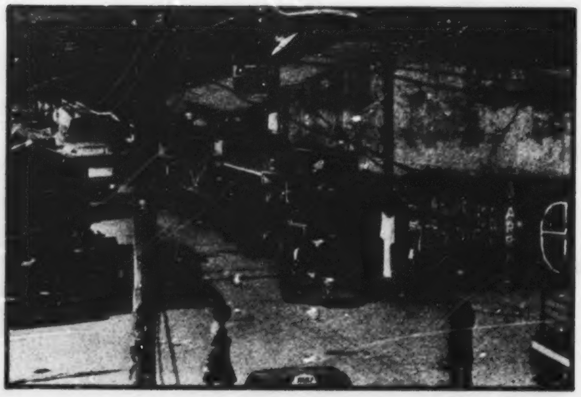
The Belaunde government has outlined a five-year development plan that includes spending for housing, education, health and social security for the poor. It also is for tourism and agricultural development.

But while he takes aim at a floundering economy and his country's most serious human problems, Belaunde is nurturing a dream. And that dream, he believes, embodies the future of Peru. It is to open up for major development both the high jungle and eastern slopes of the Andes, both virtually untouched; to offer in those areas an alternative to life in the mushrooming *pueblos jovenes* of Lima and Trujillo; to create markets and foster industries; to employ people and to provide them with public services now beyond the capability of cities straining at the seams; to make the country grow.

Peru's president is already on his way to realizing that dream. Tarapoto, a town recently established with major AID assistance in the high jungle about 300 miles from Lima, is booming. The next few years will tell if Belaunde and the international community supporting him will fulfill the rest of the dream. ☐

or his dairy cattle.

A shrine overlooks one of Lima's many pueblos jovenes.



The start of a busy market day in Tarapoto.

PERU FACT SHEET

Three times larger than California, Peru is the third largest country in South America, behind Brazil and Argentina. It is bordered on the north by Ecuador and Colombia, on the south by Chile, on the east by Brazil and Bolivia, and on the west by the Pacific. The country is vertically divided into three well defined topographic and climatic regions. The coastal area, from 10 to 100 miles wide, is arid or semi arid. It is the center for industrial, commercial and agricultural activity and claims 40% of the population. It produces more than 50% of the gross national product (GNP).

The Andes Mountains, including the highland plateau (sierra), are 200 miles wide, and occupy more than a quarter of Peru's land area. They are the principle barrier to transportation and communication links between the coast and the interior. The Andes Mountain area is the most populous, with half of Peru's people, most of them Indians, and contains the country's major deposits of mineral wealth—lead, copper, zinc and iron ore, as well as silver, bismuth, cadmium, tin and gold, among others. Recently in this area, petroleum was discovered and exploration continues, despite disappointments so far. The third area is the isolated lowlands. These occupy more than half the total land area, and consist of vast, uncharted hills, forests and tropical jungle through which numerous rivers—the only transportation route—wind to the Amazon River. Here live Peru's 100,000 "forest people," among the most primitive in the world.

Peru is a republic with legislative, executive and judicial branches. Its current president, Fernando Belaunde Terry, head of the Christian Democratic Party, was overwhelmingly voted into office, for the second time in his career, in free elections in 1980. His administration follows 12 years of military rule.

Total U.S. economic assistance to Peru in 1980 amounted to $53 million.

HONDURAS: What Hope for Central America's Poorest Nation?

Poverty has undermined progress for years, but the picture is changing.

Question: How can a junked automobile help a farmer double, even triple his harvest?

Answer: Easily—at least in Honduras. There the junk's wheel is fashioned into the hub of another, a waterwheel. And that waterwheel, rolled to the nearest stream, does what comes naturally—it turns. As the stream's current hits the paddles and the wheel moves, buckets attached to the paddles dip into the water at the bottom of the turn and at the top, dump the water into a wooden trough. The trough directs the water down into a canal. The canal ultimately carries the stream's water into the farmer's fields.

All this is possible because of the ingenuity of one man, American Ken Finney, who, after seeing a waterwheel in an encyclopedia, tried out the concept on his own in the remote hills about 20 miles from Yoro in central Honduras. His experiment caught the attention of a private voluntary organization, which then with AID help, incorporated waterwheel production into course work at its vocational school for young adults in Yoro.

Part of an integrated rural development project supported by $8.9 million in AID funds, the school is now turning out waterwheels by the score. Offered at low cost and often on credit to poor, small farmers in the surrounding area, the waterwheels are promising to turn Yoro into an agricultural center to rival the country's greenbelt which stretches east to west along the north coast.

While Honduras' mountains produce coffee, a chief export, its valleys produce nearly all the fruits—primarily bananas—and vegetables upon which the economy depends. Once dominated by such huge American-owned corporations as United Fruit, the land is now largely in the hands of small farmers who have been granted ownership through the government's land reform program.

In order to grow more, sell more and eke more than a bare existence from their newly acquired acres, more and more farmers in the valley are grouping together in a form of cooperative. In this way they can spread expenses out, share the work, and divide the profits.

One such group, the Asentamiento

of the Comayagua Valley, with its 75 member families, is producing more cucumbers than most of them have ever seen before. The farmers are using modern equipment—also a first—to cultivate, pick and package their yields. They're also providing jobs for others—another first. Once boxed and graded, the cukes are picked up by trailer truck and delivered to the docks, where they are shipped to Miami to be marketed by an American broker in the States.

The project is the result of a joint effort by the Honduran Ministry of Agriculture, AID, and Standard Brands, which has donated the services of one of its crackerjack managers, Don Braden, for one year.

For farmers in Comayagua, farming can pay off; it cannot in most other areas of Honduras. In the valley it's possible for farmers to get their produce out over good roads to relatively close markets. In contrast, in Zacape for example, the harsh, mountainous terrain and barely passable roads leave farmers at a distinct disadvantage. In fact, until recently, those who were able to transport produce to market, usually on their backs or by mule or horse, were forced by a combination of factors, including spoilage, to accept whatever price was offered. And it was usually low.

Now, however, the picture is changing. With AID help, the government is building a suspension bridge over the Ulua River (to replace a rickety, narrow foot bridge) and a "rural trail"—one step down from a major roadway. These will link Zacape and the surrounding countryside with the market towns. What that will mean to the farmers is that not only will they be able to sell their produce more easily, but, more importantly, for the first time they will not be at the buyers' mercy. It will be the other way around. Buyers will begin to come to them, and the farmers will learn the art of bargaining.

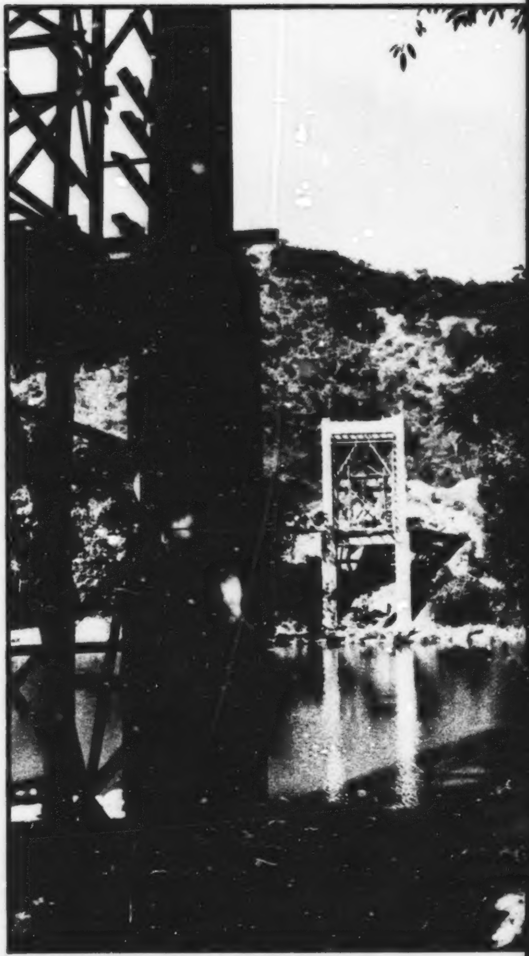
Projects like the Zacape bridge and trail have other, indirect benefits. The people of Zacape will be better able to find medical care and schooling. Moreover, the construction itself is providing jobs for many.

What else the new trails mean was expressed recently by workers at the bridge project. They recalled a man from the countryside surrounding Zacape who nearly amputated his leg not long ago while chopping wood with a machete. Because there was no medical care close by, his neighbors carried him—on a hand litter—out of the hills and many miles to the nearest medical center. The man bled to death before he could reach help. That won't happen now, the people say.

Despite improvements like this, there are still too many isolated areas in Honduras and too few medical centers, too few schools, too little opportunity for most Hondurans.

Bordered by El Salvador and Guatemala to the west, Nicaragua to the south and the Caribbean to the east and north, Honduras is the second poorest country in the Western Hemisphere. Only Haiti is poorer. No more than half of Honduras is developed to any degree. The rest is wilderness, without roads or services.

Most Hondurans live in the countryside. Over a third are small, sub-



Near completion, this bridge will link farmers to markets.

Children in Pespire await inoculations in a rural clinic.

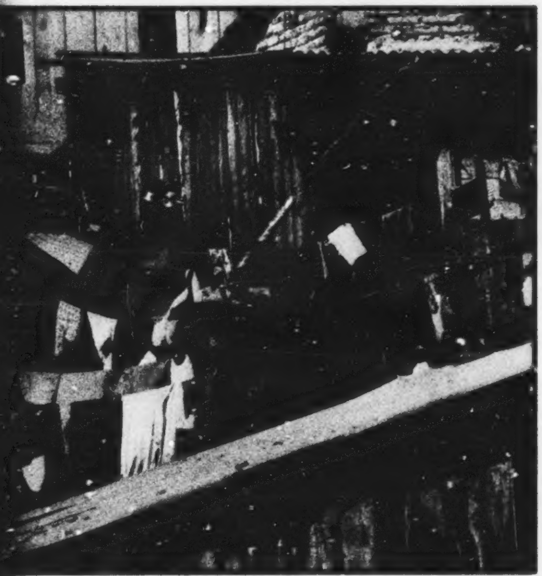
sistence farmers earning about $125 a year. Almost half the people living in rural areas are "landless poor," meaning that they have no fields to farm and are forced to pick up work where and when they can in others' fields or in whatever industry or business exists outside the cities.

The so-called agrarian reform farmers are better off. Representing a tenth of the whole, they came into possession of land once either national land or part of huge estates through the government's land reform program begun in 1979. Some of them still receive a certain amount of government assistance in running their farms—and their yearly earnings amount to about $450 per person.

About 119,000 families in all have absolutely no land; 34,000 have farms that are not productive.

More than a third of all Hondurans live in the cities. As in other developing countries, the number of city dwellers is on the rise as country people give up hope and migrate. The two major cities, the capital, Tegucigalpa, and San Pedro Sula, a growing industrial center, are drawing new people at a rate of 3.2% a year for the former and 6.2% for the latter. Most newcomers live on the fringe in what are called barrios. Some find space within the city limits in multifamily houses called cuarterias, or in individual, substandard houses. Squatters put up shelters wherever they can.

Lines of wash in a crowded barrio in Honduras' capital, Tegucigalpa.



A few years ago a group of newcomers set up homes in a long-dry riverbed that runs through Tegucigalpa. A freak storm brought a flash flood that swept hundreds of people to their deaths. Since then, the city has outlawed settling in the dry-again river.

There are 350,000 people now living in Tegucigalpa—or about 53,500 families. About 27,000 families have incomes of less than $190 a month. At that level, they cannot find decent housing. Families are forced into the cuarterias, which are for the most part dilapidated and rat-infested. Electric wiring is often faulty and dangerous. Several families must share one toilet, and often it doesn't work. There is usually only one common washing area.

In Tegucigalpa various organizations are struggling to resolve such housing problems. Among the groups, the Housing Institute (INVA) and the Honduran Federation of Housing Cooperatives (FEHCOVIL) are developing low-cost housing programs. Funds for the programs have been made available through AID's Housing Guarantee Program in cooperation with the Central American Bank for Economic Integration and with technical assistance from the Foundation for Cooperative Housing (FCH).

FEHCOVIL has nearly completed one low-cost development in the Zapote North section of Tegucigalpa. Where squatters' shacks once stood, there are now more than 300 neat row houses with safe water, waterborne sewage, reliable electricity and public lighting. The houses stand on a lot approximately 16 × 42 ft. in area. Each has a front patio and a backyard. Each house has a shower, porcelain toilet and laundry washstand. Many have lorena stoves in the backyard. The stoves are provided through Save the Children. The houses each cost about $2,000 to build, and FEHCOVIL sells them for that amount. New owners pay monthly installments of $20.

All home owners in the Zapote North project are members of the Zapote North House Cooperative. The cooperative grew out of a "patronato," a de facto organization that directed the squatter "invasion" of the Zapote neighborhood a few years ago.

The poverty that afflicts people in rural and urban settings alike produces problems that all share. Poor health care and inadequate education are perhaps the most serious in terms of the potential of the nation as a whole.

The Honduran education system is weak from the top to bottom, fragmented and always under pressure from highly political teacher unions. It is further beset by ever-growing numbers of children of school age. Schools also are perennially short of needed resources despite hefty budget increases. There is little policy direction, weak or no planning, few trained teachers or administrators, few textbooks and meterials. The problem is worst in the rural areas, where most of the children live.

It is estimated that only 60% of school-age children go to school. While this is higher than in many developing countries, especially those in Africa and Asia, it is relatively low for Latin America. In Costa Rica, for example, 100% of the country's children go to school; half continue into high school. The problem in Honduras is heightened by a shortage of classrooms—now over 3,000, based on an average class size of 30. Actually, many elementary classes have as many as 70 to 90 pupils. Most Honduran children do not go beyond the fourth grade.

With its current limitations, Honduras is not developing the human resources it needs. AID is attempting to help the government analyze its

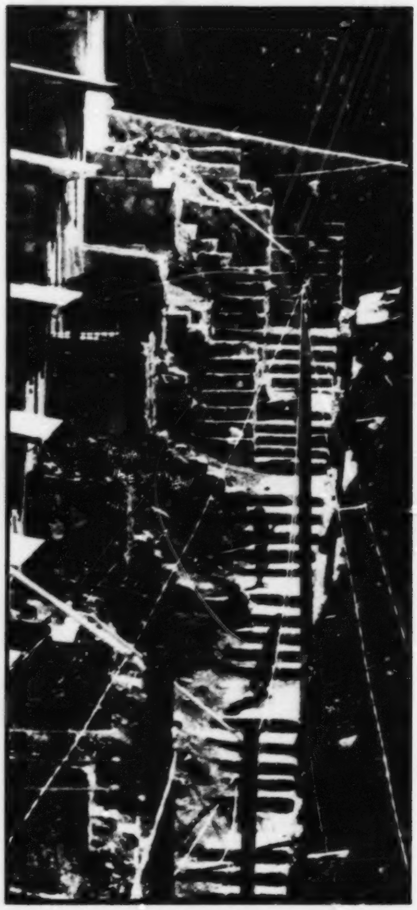
A furniture factory in Choluteca provides jobs and training.

policies and generally manage better. A better system means establishing teacher training and qualifications, personnel management, standards and testing, materials production and curriculum development.

Poor health and malnutrition continue to undermine the productivity, income and well-being of most people. Less than half of all Hondurans can easily obtain even basic medical care. Whether in the countryside or the cities, many people do not have an adequate diet. Babies die—103 in every 1,000.

In the last five years AID has assisted the government of Honduras in training over 500 midwives and over 2,000 community health workers and representatives for the primary health care system. An AID nutrition loan is financing the installation of 1,635 wells and 17,326 latrines. Also over the past five years the Inter-American Development Bank (IDB) has underwritten the building of 243 rural health posts, the national teaching hospital and the renovation or building of 10 regional or area hospitals.

Other efforts by AID, IDB and the World Bank are focused on increasing the number of people who have



The back yards of these homes funded allow for expansion.

There is a great need for more jobs throughout Latin America. These women are making gloves in a furniture factory.

Students in an AID-funded nurses training program are studying anatomy.

safe water, dependable sanitary facilities, basic health care and adequate nutrition. PL 480 (food aid) is aimed at enabling the national Nutrition Planning System to monitor nutritional status and adjust supplemental feeding. This is accomplished by building nutrition and health education into feeding programs. The goal is primary health coverage for all, safe water and sanitation for most, and a substantial reduction in malnutrition, all by 1990.

Especially as contrasted with that of other Central American countries, the Honduran economy's upward development curve offers not only a growing domestic market but also increased investment opportunities. This and the country's traditional dependence on the United States as a trading partner offer attractive possibilities to U.S. firms.

Four of the largest corporations in Honduras are American; there are no restrictions in repatriation of profits, dividends or capital. In recent years Honduras has attracted new foreign investment in petroleum exploration, mining, pharmaceuticals, wood products, tourism, pineapples, tobacco, shrimp farming, cement, clothing and textiles.

In general, Honduras has a very open economy. Foreign trade accounts for 40% of the gross national product. Principal export crops are bananas and coffee. Others are lumber, beef and minerals. The total value of export crops was estimated at $870 million in 1980.

The overall rate of growth in the monetary value of all goods and services produced in Honduras (gross domestic product) dipped from 7% in 1979 to 2% in 1980. Inflation, though moderate, is accelerating; it is now 7%. Foreign exchange reserves are in danger because of a balance-of-payments deficit. Consequently, Honduras has entered into an agreement with the International Monetary Fund (IMF) to establish a reasonable framework for economic policies. But for the time being, the economic picture will depend on exports and on restoring private sector confidence.

One danger signal on the horizon: Coffee rust has appeared in Honduras after devastating crops in neighboring countries. With coffee accounting for more than a quarter of all export earnings, the effect of the rust on the balance of payments and on the well-being of some 30,000 small coffee farmers and their families could be devastating.

To counter the threat and shore up coffee farmers until the rust is gone, AID recently approved an $8 million program to provide credit and technical assistance.

If Honduras is to advance, it must follow a course that will allow it to expand exports, increase and diversify agricultural products, and develop other exports based on raw materials, especially wood.

At the same time, Honduras' long term development will depend on how well it can cultivate its human resources. In this especially, it will need the continued help of international donors, including the United States. □

HONDURAS FACT SHEET

Roughly about the size of Ohio, Honduras is the poorest country in central America. Its per capita gross national product is $480,000, with a yearly growth rate of about 2%. Its 3.6 million people live a meagre existence in predominantly rural areas. About 90% of the people are a mixture of Caucasion and Indian blood (mestizo). While vast banana plantations and other agribusiness operations are concentrated in a greenbelt along the north coast and in a series of fertile valleys in the center of the country, about one-third of Honduras remains totally undeveloped.

That area, to the east and north along the Caribbean, contains some of the country's richest mineral resources—gold, silver, lead, zinc and antimony. The government has begun road projects to offer access and stimulate development.

At present Honduras is slowly building an industrial base, in the northern city of San Pedro Sula. But its economy remains dependent upon agricultural exports: bananas, coffee, lumber, refrigerated meat and some minerals. Two hurricanes in the 70's and a major scandal in the banana business set banana exports back severely, but they have regained some ground. Now coffee rust has appeared and is decimating crops in many parts of the country. Overcutting is threatening to deforest the land and lead to erosion problems. All these factors are contributing to economic difficulties that impede Honduras' progress.

Bordered by Guatemala, El Salvador and Nicaragua, Hondurans feel threatened by political unrest around them. The Honduran military has legislative authority through a Council of Ministers. The ministers are appointed by a chief of state. Much of the country's financial resources are funneled into the military.

Honduras instituted Agrarian Land Reform in 1977, a prime objective of which was the establishment of a land tenure system that would assure social justice as well as augment agricultural production and productivity.

Total U.S. economic assistance to Honduras in 1980 amounted to $53 million.

COSTA RICA: Is the Showcase Cracking?

Long a model for steady development within a democratic system, the country may be faltering now.

For years considered the showcase of democracy in an otherwise turbulent Central America, Costa Rica may be rocked out of its tranquility in the not-too-distant future. The same disruptive forces pressuring its neighbors—economic uncertainty, inflation, high oil prices, unemployment, a growing, young and poor urban population, all are beginning to bear down on this progressive nation.

Many believe Costa Rica must pursue a different course, one that will hasten production even at the price of diminished services.

"We are in the dangerous system where we socialize losses and privatize profits," observes one of the country's foremost economic experts.

"One of the biggest dangers," explains another economist, "is that Costa Rica may be going the way of Argentina, for example, which is showing no growth."

Others make comparisons with Uraguay in the 60s.

Undoubtedly, for the present, Costa Rica is better off than perhaps any other Central American country. Costa Rica's people enjoy not only a higher standard of living, but a longer life than most other Latin American people—an average of 69.7 years as compared with 52 for Peru and 50 for Haiti. Moreover, there are few large estates—small farms have been the tradition in Costa Rica. There is relatively little malnutrition and almost 80% of the people can obtain safe water and health care.

A good record. But achieving it has been costly. Good unused land is all but gone and much of the land in use for cattle raising, an important export activity, is being ruined by overgrazing. At the same time, the government's export barriers limit trade potential with markets outside the Central American Common Market and there is little hope for substituting the raw materials and machinery the country has to import for industry.

Faced with a heavy debt burden and fiscal deficits, Costa Rica will be hard pressed to continue public services at the current level. Yet there are many people who need those services.

Certainly, despite its economic and social achievements, Costa Rica does have its poor—nearly a quarter of all its people live below the poverty line. About three-quarters live in rural areas, and almost half of the urban poor are concentrated in the capital, San Jose.

Limon, the country's main port city, perhaps has the greater potential for exploding. These people—many of Jamaican heritage—are relatively isolated from the mainstream. The city is almost entirely poor. Already stretched to the limit to provide services to its population, Limon is now further pressed by hundreds of destitute country folk migrating to, and settling in the city.

The situation in the countryside is troubled, too. Some 42,000 families own no land and another 18,000 don't have enough land to provide them with an adequate income. The result is a combination of underemployment, low productivity and environmental damage.

There are areas of the country which have not been touched by the nation's overall progress. For example, the Atlantic basic region on the Caribbean coast and the northern zone bordering Nicaragua still have poor farm-to-market roads, high illiteracy and unemployment. There, people often do not have safe water, electricity or sanitation facilities.

And now, following an unprecedented success in lowering its birth rate (from 7.3% in 1960 to 3.7% in 1976) and in the overall population growth rate (from 3.9% in 1960 to 2.8% in 1978), birth and growth rates are again rising.

Many Western nations have an interest in seeing Costa Rica remain strong, an example to other countries of the viability of democratic government in the Third World and an ally against communism. Costa Rica is receiving assistance not only from the United States, about $7 million in economic development assistance in Fiscal Year (FY) 1981, but also from Venezuela, Japan and Germany, among others. The Inter-American Development Bank (IDB), the World Bank (IBRD) and the Central American Bank for Economic Integration (CABEI) all have made loans for a variety of development projects. They include roads, electric power plants and transmission lines, port development and higher education, agriculture, forestry and health.

CATIE, the Tropical Agricultural Research and Training Center in Turrialba, is financially supported by nearly every country in Central America, as well as the United States and other international donors. Research accomplished at this center can be and is put to use immediately

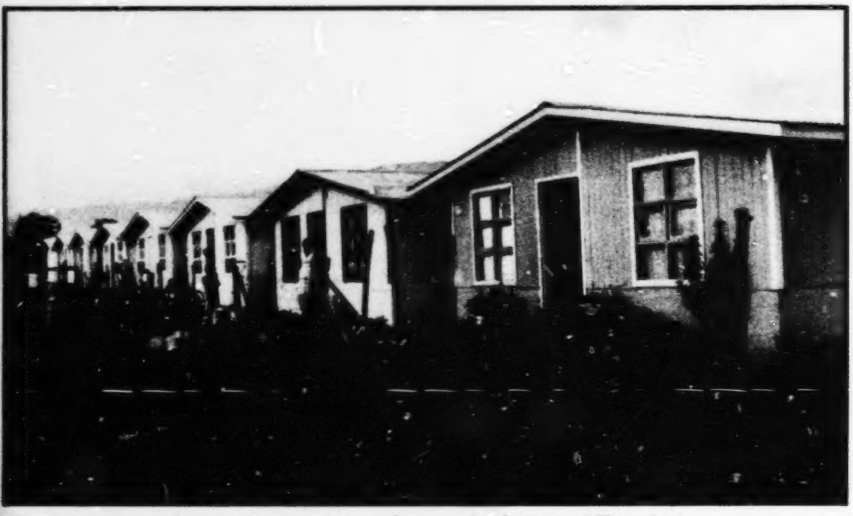
Small industry may be the key to jobs in San Jose.

and easily to help poor, small farmers throughout the region grow more, and earn more from their fields.

Many of CATIE's findings are remarkably simple. For example, by planting corn with other vegetables, beans for one, in a system called intercropping, the farmer can accomplish several things at once. The corn stalk will provide some of the support the beans need to grow well. The stalk later can be bent over, and with its ripened corn still attached, it serves both as a storehouse for the corn and support for the other plants. The corn is safer on the stalks than stored on the ground as it usually is. There it can spoil quickly and is often eaten by rats.

Another "breakthrough:" In a dairy farming module CATIE has developed a system for rotating dairy cows by dividing the pastureland off into small segments. The cows are moved from one small pasture to another. This way the land is not overgrazed, and the cows are always eating. Farmers also are taught how to improve their pasture grasses. The module also includes an ingenious but simple apparatus for milking. It is portable and operates on a vacuum principle without electricity. It is far less expensive than electrical milking machines and more efficient than hand milking. CATIE is training local farmers to set up their own farms this way. So far the local people using the system are doing well.

This backyard garden provides vegetables for the family to eat and market as well.



These new houses have a clean water supply now, thanks to an AID project.

The outlook is less hopeful in the Nicoya Peninsula in the canton (or county) of Hojancha, one of the poorest regions of Costa Rica. There Victor Villagra struggles to make his farm produce enough to feed his family and give them just a little extra to sell. Bent and weathered before his time, the 45-year-old farmer is now facing a new problem: His back is giving out. Villagra might have joined the flow of people into the city years ago, but he has held out. Now as his resilience is finally wearing thin, he is getting help under an AID-supported project, and has reason for hope of better harvests to come.

Villagra, coached by an agricultural "promoter," is taking a new look at what he is asking his fields to produce. Under the tutelage of the promoter, better known as one of the "Tigres" (tigers) for his fierce determination to improve farms throughout this region, Villagra has changed his ways. Instead of planting maize (corn), arroz (rice) and beans as he has for years, he is now growing tomatoes and bell peppers, high value crops in this region.

"Tigres"—there are about five of them—go from farm to farm, hitchhiking, on horseback, by bus if they're lucky. All recent graduates from agricultural school, they earn salaries paid largely out of an AID "commodity systems" loan.

Under the program, farmers like Villagra receive help in obtaining credit for buying the supplies, equipment and seed they need. Villagra has been granted a loan of 2,000 colones ($200) from a major bank.

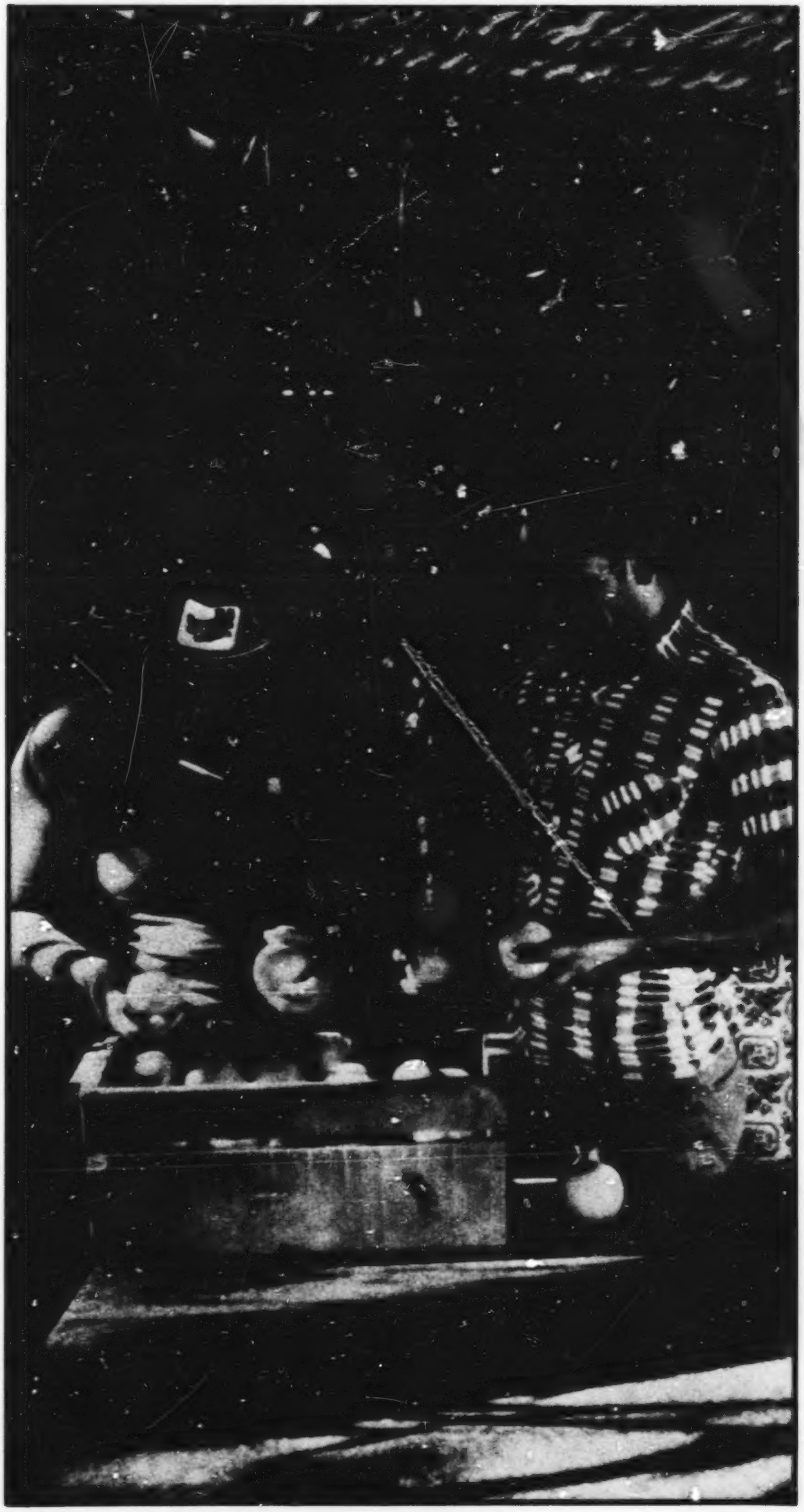
Regularly now he takes his crops to the Canton Agricultural Center which grades the produce and sells it, some at its own small local market, the rest to wholesalers. The center also is funded through the AID commodity systems project. Accion International Tecnica (AITEC), an American private voluntary organization, with an AID grant, is helping the center in Hojancha and in other poor parts of the country to improve production and marketing among farmers and small businessmen

Bees are becoming a viable business in many Central and South American countries. As part of its business promotion, AITEC is operating a model beekeeping operation in Hojancha which can be replicated in other areas, particularly the western part of the country. Normally there is a good market for honey and pollen both in Costa Rica and the United States.

Small businesses, particularly in the cities, offer the greatest hope not only for self-sufficiency of the individuals running them but for employment possibilities for others. In the overburdened urban centers like San Jose, there are not enough jobs to go around.

The family and neighbors of Rodrigo Castro are therefore more than grateful to be working in his shop. In his garage, Castro is producing safety triangles, the sort that someone would place behind his disabled car to warn oncomers. With help from an AID-supported program, Castro has received credit from a bank that otherwise would have passed him over. The result is a steadily growing business that provides all-important jobs for about four or five persons.

Through a $6 million loan made over several years to the government, AID is helping the National Nutrition Program set up a nutrition information system, carry out research; train field personnel; and educate mothers in the principles of nutrition. Moreover the Agency is helping install wells and handpumps to increase the availability of safe water to those living in outlying areas. So far, the program has lowered the number of children suffering from malnutrition; has helped many indi-



Victor Villagra examines his harvests with one of the "Tigres."

BEST DOCUMENT AVAILABLE

viduals start home gardens not only to provide a little added income but also to better the quality of food the family is eating; and has installed about 1,500 handpumps. To improve the health care for people who otherwise might have none, the program has set up two training centers in San Ramon and San Carlos. Out of these centers "responsables de salud" health advisors go into their neighborhoods to help teach nutrition to mothers, provide basic first aid where needed and refer serious cases to the health centers.

Costa Rica is a quiet nation. Few of its people die from starvation, deprivation or bloodshed as in other Central and South American countries today. That Costa Rica has been able to provide a high standard of education and other services for its people is due in large part to its refusal to direct funds into a large military. It has only a national guard.

A former president, Jose Figuero "Don Pepe," once said: "Our children are our army; their books are their weapons—that's all we need."

Costa Rica would like to keep it that way. But if it is to succeed, it will have to find ways to solve the serious economic problems that threaten its calm.

The international donors stand ready to help: The International Monetary Fund (IMF) is prepared to offer extended financing facilities to help Costa Rica make the structural adjustments necessary to shift from import-substitution industrialization to an agro-industrial export strategy. Costa Rica also needs to reduce public sector activity and simultaneously encourage greater private sector activity. Meeting the challenges will not be easy, even with IMF support, and development help from the World Bank, the Inter-American Development Bank and AID. But people who know the "Ticos" have confidence in their ability to get through this crisis: to maintain the admirable social programs in operation while finding new sources of economic growth and to do so democratically. ☐

Health advisors Corina Jimenes Cespides, Oscar and Marlene Aguilar Nunez compare notes.

COSTA RICA FACT SHEET

Costa Rica is located in a narrow section in southern Central America between Nicaragua and Panama. Smaller in area than West Virginia, it is the second smallest country in the region (El Salvador is smaller). The country is comprised mainly of rugged, high mountains and hills drained by numerous streams and rivers. Once dense forests covered about two-thirds of the area; overcutting and cattle-raising, have caused serious deforestation. There is a relatively wide coastal plain in the east and a narrower plain on the Pacific coast.

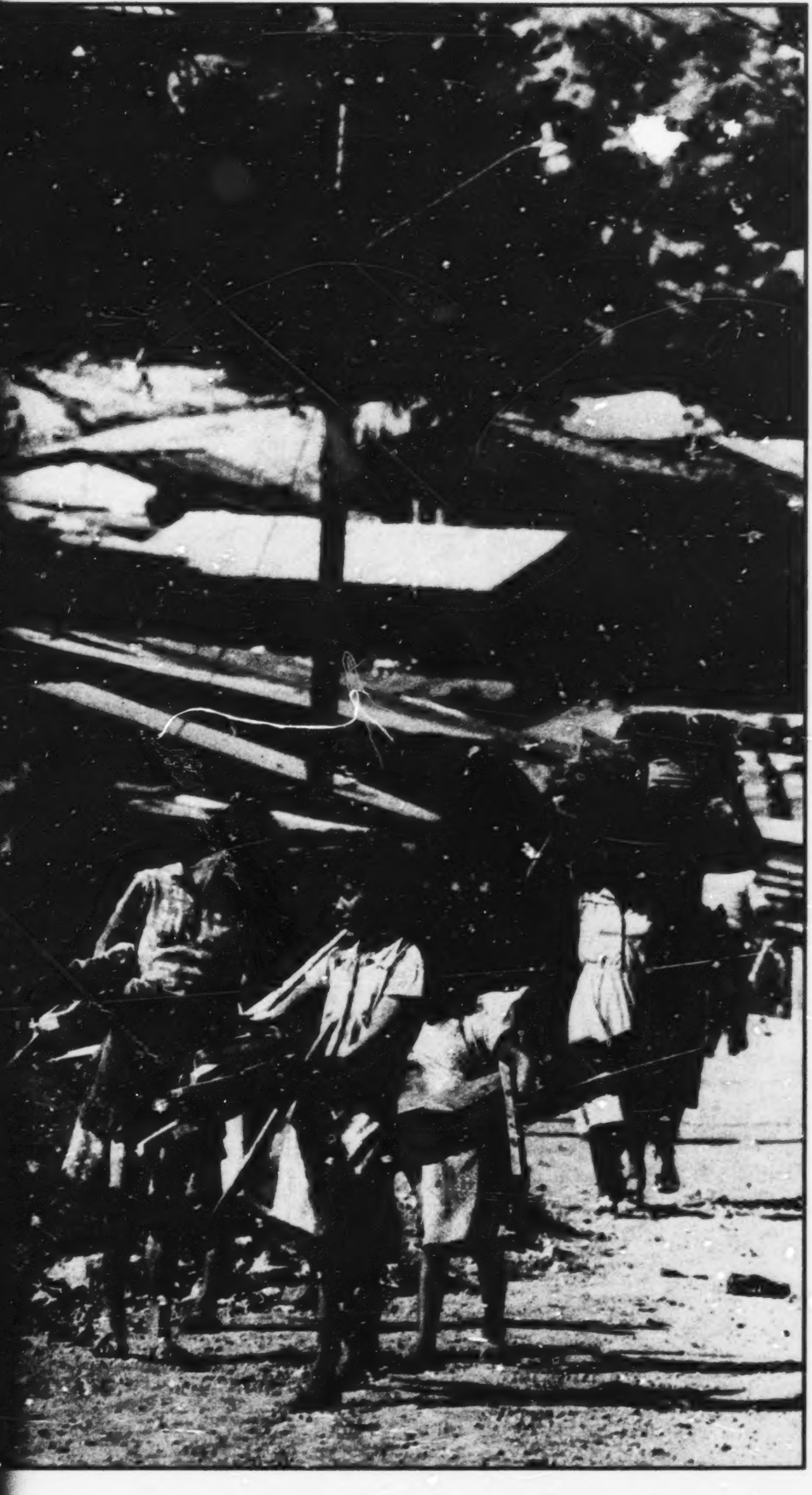
Unlike their Central American neighbors, Costa Ricans are overwhelmingly of European descent, predominantly Spanish. The indigenous Indian population numbers about 10,000 and is concentrated in the largely inaccessible southern region. Blacks, descendents of Jamaican workers who migrated to Costa Rica in the late 19th century, constitute the only significant minority group. They number about 30,000 and are centered around Limon on the Caribbean. Most Costa Ricans continue to live in the countryside (57%). San Jose is the only city of over 100,000.

Costa Rica is a democratic republic. The government is divided into three branches: executive, legislative and judicial. Elections for the president and deputies of the legislative assembly are held every four years. The president and two vice-presidents run on the same ticket.

Several elements have contributed to Costa Rica's steady democratic development: educational opportunities, enlightened government leaders, comparatively high economic levels and flexible class lines. Costa Rica has Central America's highest figure for the per capita gross national product ($1.5 million). Although industry is becoming increasingly important, agriculture is still predominant, employment about 35% of the labor force.

Despite economic difficulties relating to balance-of-payments, Costa Rica continues to offer a favorable investment climate. Opportunities exist in agribusiness, tourism, light industry, and once the country's hydroelectric resources are better developed, in energy-intensive industries such as aluminum smelters.

Total U.S. economic assistance to Costa Rica in 1980 amounted to $16 million.



When Digna returned to the nutrition program a week after having her baby, I could tell that something was different. The most visible change was that she now always wore a headkerchief; I had never seen her wear one before. But there were other changes too. For one thing, Digna appeared to be eating less than usual, and she was not eating some foods altogether. Then, when I asked her to grind some maize (corn) for the noonday tortillas, she seemed embarrassed, and said that she couldn't in "these days," adding that she would not be able to sweep or wash floors, or wash large pieces of clothing—part of her daily chores in the nutrition program for which I worked. The 12-week session was being offered by the Horizon of Friendship Foundation with AID support.

I soon learned that what Digna had referred to as "these days" was "La Dieta" (The Diet), the name given to the woman's first 30 to 40 days after her baby is born. As the name would imply, "La Dieta" influences her choice of, and the amount of food she will or will not eat. In addition, "La Dieta" is a time of rest for the new mother, and as such, influences what work she can or can-

The Way It Has Always Been . . .

Some age-old customs are a deadly heritage.

by Debra J. Zakus

not do. In this way, Digna introduced me to the reality of "costumbres" (customs) and their influence on the life of a woman living in rural Honduras.

I soon realized that the customs in our area of Honduras varied from neighbor to neighbor, sometimes drastically, because this area near Monterrey, Choloma, Cortez, was an area into which people from all over had migrated. Many people had been attracted to the Choloma area in the fertile Sula Valley after Hurricane Fifi had swept through the countryside in September of 1974. It was extremely interesting to me to learn about the many customs and their variations. But where I tended to view the inconsistency of the beliefs as an indication of their unreliability, the women would explain away any inconsistencies by saying, "well this is my custom whereas that is her custom." That seemed to make all the difference. If it was a woman's custom to eat eggs in "La Dieta," than she could eat eggs. But if it was not a woman's custom to eat eggs in "La Dieta," and she did, she would be sick. It was as simple as that. Or so they said, and who was going to prove it otherwise?

A woman in "La Dieta" may eat a little chicken or cheese, but nothing else or either eggs, milk, fish, hot chilies or acid foods, such as citrus fruits. Too, while it is the custom of some women to virtually remain in their beds for the 30 to 40 days, others, like Digna, will do many of the household chores, though most will not sweep or wash floors, grind corn, wash clothes other than very small ones, or lift anything heavy.

Connected with the time of "La Dieta," is the popular belief that there are certain times when a woman's body pores are open. For instance, Digna's headkerchief, as she explained to me, was necessary to keep the wind from going through her head. And, just as she believed that her head pores were dangerously open, she believed that her body pores had been open for the first five days after the birth of her baby and, fearing the result of having water pour into her body, had not bathed until the sixth day. This custom also affects many of the women in their days of menstruation, for in this time it is again believed that the body pores are open, and women will not bathe and risk stopping the flow of blood.

Many of the customs affecting the women stem from the generally held belief that at certain times a woman's blood is "bad," such as the blood that she loses in menstruation, whereas at other times it is growing and new, such as the blood that replaces what she has lost in menstruation, or the blood that grows after a baby is born. It then follows that some foods adversely affect the "new" blood, while other foods help it to grow; and it is this, then, that determines many of the woman's eating habits in "La Dieta," her pregnancies and her days of menstruation.

Of course, many of the customs that the woman follows directly or indirectly affect the health of her children. The mother's dietary habits during her pregnancy directly affect her unborn child, while her food customs in general affect her own state of health, and in turn, indirectly affect the health of any future children she will have.

A child's health may also be directly affected by the length of time that he or she is breastfed. In Honduras, where a high percentage of the young children are malnourished, it is sad to see the practice of breastfeeding declining; it is even sadder to realize that in many cases this is directly attributable to the customs of the women. For instance, most women believe that if a mother is breastfeeding one child and becomes pregnant with another, she must stop breastfeeding because her milk will have turned bad. Yet interestingly enough, if she wants a boy, and is breastfeeding a boy, she can continue. If she is breastfeeding a girl, and wants a boy, she must stop. In the Honduran "campo" (countryside), where boys are more of an economic asset than girls, what family, especially the father, does not hope for a boy every time? Thus a custom that works even more against the health of the little girls goes on.

When the baby is finally born, most women believe that the colostrum that is produced by the body for the first few days is bad milk, and will not begin to breastfeed their baby until their regular, white milk comes in. (In fact the colostrum contains nutrients the baby needs, and is nature's way of introducing the baby to the milk that will follow.) The baby is fed with a bottle until the regular milk begins to flow. When the mother does begin to breastfeed, the baby may not take to the breast immediately, and this discourages the mother. She in turn may be much more likely to give up breastfeeding early or continue to use the bottle as a supplement, because she thinks her baby wants it. As well, many women do not continue breastfeeding for very long, and begin to use a bottle supplement very early, because they do not think that they are producing enough milk for their babies' needs.

The health of all children in the home is very much affected by the customs of the women who decide what the family will eat, as well as the rituals of eating. One still common belief is that boiled water is dead water. This, of course, can cause harm, since most of the water in the developing world is contaminated. The woman also decides who will eat what, or if they will have anything at all. For instance, if a woman has an egg, she may sell it, she may give it to the oldest member of the family to eat, or she may use it in a soup. What she rarely will do is give it to the small children, despite their need. The woman's customs also dictate in what order she will serve the meal to her family. Thus even if everyone is to eat the same meal, it is often the older, working members who will eat first, leaving little of the best food for the small children. They will eat last, if anything is left.

This child, showing signs of malnutrition, is enrolled in a nutrition program.

When many of the customs of Honduras work directly or indirectly against the health of the people, especially children, it then follows that there will be more sickness in homes. As can be expected, there are scores of customs which the women must follow to treat illnesses and these run the gamut from treating simple fevers to treating serious wounds—children often are hurt while playing with their fathers' machetes. To treat a fever, the general cure is to wrap the child up in a hat, sweater, shirt, pants, socks and any other clothes the mother can find, after applying a paste of herbal leaves and spices to the body. For a wound, the mother rubs mud or animal dung into the wound before wrapping it with a piece of cloth. Clearly such customs contribute little to the recovery of the patient.

Other customs at least appear to do no harm. For example, it is believed that when a child has red eye or conjunctivitis, passing the tail of a cat over the bad eye will make the redness disappear by the second day.

All of these customs are commonly practiced by women in Honduras today. Their influence is great, yet it is hard to determine the extent of the hold these customs have on people in various walks of life. The rest of Digna's story suggests that they have a very strong hold.

Digna returned to her home one night very late to have her baby. The next morning her husband came to the project on his bicycle, extremely upset: His son had been born with a crooked foot. Jorge knew that a number of weeks earlier, Digna had worked to plant a garden with the other women in the nutrition project and he blamed this work for his son's deformity.

I immediately went to visit Digna's home, and while there found that Digna's mother did not share Jorge's belief. She said it was silly for Jorge to think that the baby's crooked foot came from Digna's garden work. It was clear, she added, that it had been caused by an accident Digna had had early in her pregnancy on Jorge's bicycle. Nothing I could say seemed to change Digna's mother's opinion.

Upon returning to the nutrition project, I found that everyone was talking about Digna's new baby, and of course, his crooked foot.

The project workers were all chuckling about Digna's husband. As they said, it was silly for him to think that the foot had been twisted when Digna was working in the garden, for as everyone knew, she had not worked in the garden nearly long enough for such a thing to happen. But, had she worked just a little longer . . .

Until recently Debra J. Zakus was a teacher in the AID-funded nutrition program in San Pedro Sula, Honduras. She is now in graduate school in Canada.

WHAT THE MEDIA SAY...

The Reagan Administration has taken a step toward restoring the credibility of U.S. policy among Third World nations in the Eastern Hemisphere by reaching a preliminary agreement this week on closer economic and security ties with Pakistan. U.S. rapprochement with Pakistan is significant because of that country's key geopolitical position. This will serve both the U.S. and Pakistani interests far better than the preachments of the past Administration ever did.

—Wall Street Journal

The appalling fact is that roughly half the world's refugees are scattered through Africa. They are not simply the victims of drought and famine but of power struggles among and within politically fragile African states. . . Little help is expected from the Soviet bloc, whose leaders piously contend that the misery of African refugees is the fruit of Western imperialism. But Soviet arms in the hands of Ethiopian troops are partly responsible for spreading famine and pestilence; and Libya uses Soviet weapons to prolong a cruel war in Chad. These horrors have not been produced by the West, and the Reagan Administration is earning the right to finger the real culprits.

—New York Times

It would be a most conservative guess, given the climate in Washington and Moscow these days, to say that the world, during the Decade for Water, will be spending $5 trillion on arms. The $132 billion needed for clean water and sanitation facilities for the world's peoples, therefore, would amount to less than 3% of expenditures for military activity during the same period. Expressed in another context, diverting Arkansas water to the High Plains to produce more beef steak could cost as much as $40 billion and it would all presumably come from the federal government. The money would better be spent as the United States' contribution to safe drinking water for desperate peoples everywhere who won't survive without it.

—Jerry Dhonau,
Arkansas Gazette

The aid package for Pakistan ought to more closely resemble the aid program for Zimbabwe. It should emphasize economic assistance that will encourage self-development and bilateral trade. The emphasis on weapons is a dangerous substitute for that.

—Des Moines Register

Even if Congress suddenly decided to stop the United States' escalating involvement in El Salvador, under current law it could only block $130 million out of $523 million. This erosion of democratic, or at least legislative, control over aid decisions is a byproduct of the rise of multilateral financial institutions in the 1970s. The internationalization of aid has helped increase the amount of badly needed development assistance to the Third World. It has tended to detach foreign aid from the narrow foreign policy goals of donor nations. But in the case of El Salvador, successive Administrations have sought to harness these multilateral development institutions to what is, at this point, an almost exclusively U.S. operation. . . . Despite the glare of publicity surrounding El Salvador, most of the aid program is beyond public view. Most of it escapes Congressional oversight. And, what is most ironic, most of it is to come from allies that disapprove of the policy it supports.

—Jim Morrell
New York Times

Americans by and large enjoy an enviable standard of living. Their warmth, love and values have won them friends and admirers around the globe. Securing a safer and saner world now demands a degree of enlightened self-interest by Americans. The global balance of power may hinge upon the views of developing countries, and the global economic outlook may critically depend upon the ability of Third World nations to overcome their current awesome problems.

—Frank Vogel
Los Angeles Times

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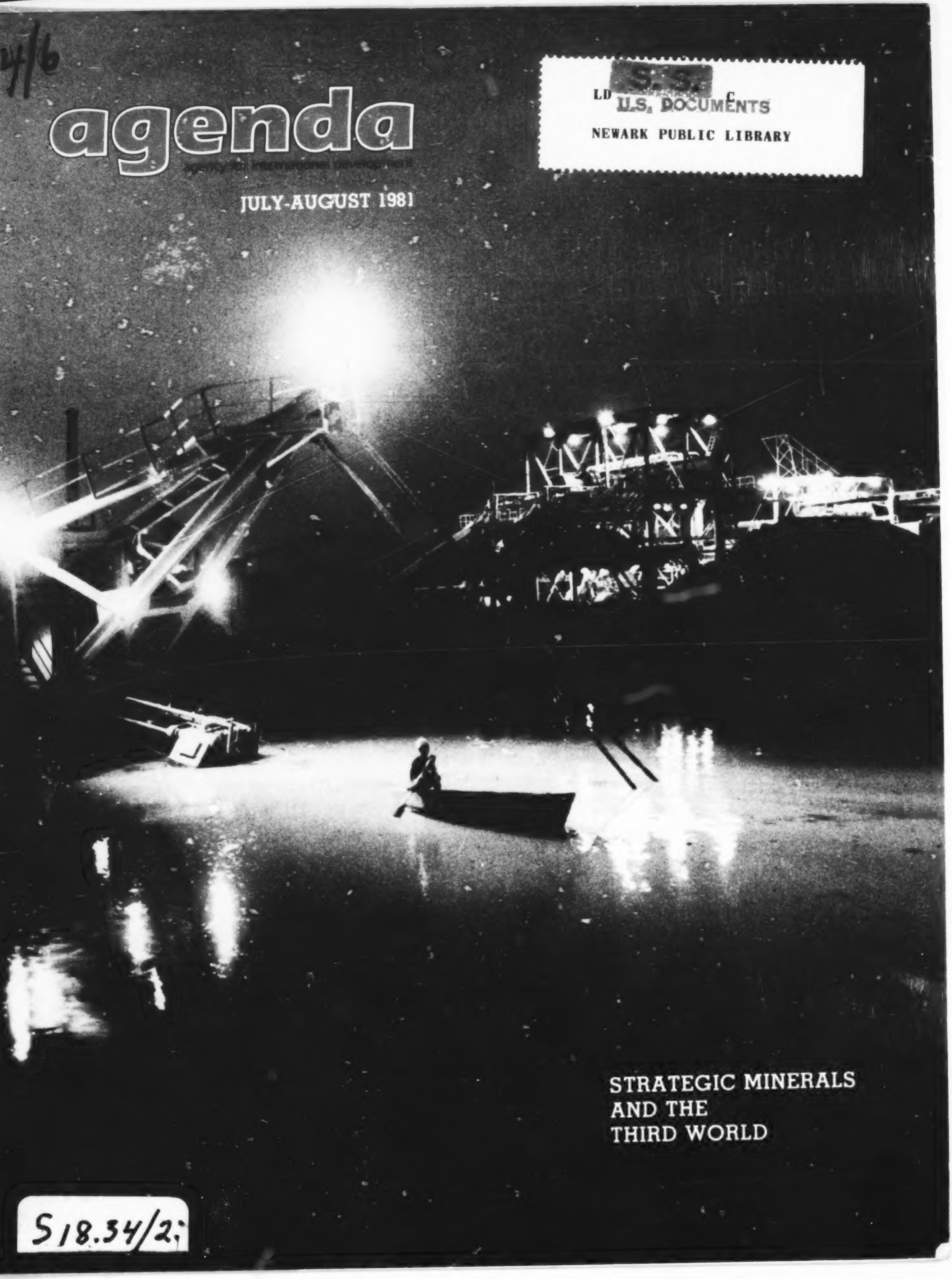

STRATEGIC MINERALS AND THE THIRD WORLD

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DEVELOPMENT UPDATE

What are the basic human needs for development? According to a World Bank report: five years at school; adequate nutrition; primary health care no more than an hour away; family planning services; at least 20 liters a day of pure water per person within 100 yards of home; and a pit latrine.

Development, a long hard road: "I was part of a rural health program in West Africa," recalls an ex-Peace Corps volunteer. "We were received very warmly into the villages and the women seemed to listen very attentively as we tried to explain the importance of sanitation and nutrition. We noticed that the village children were eating dirt and of course we urged the women to make them stop and explained why. They nodded and said 'yes, yes' but the children kept at it. Africans are very polite people and they don't like to tell you something they know you don't want to hear. But finally one of the women spoke up. 'We can't tell the children to stop eating dirt,' she said. 'That's what makes their bones grow strong.' And suddenly I realized what a big job lay ahead."

Lady with a hoe, etc.: Women provide 30% to 70% of all agricultural labor in the Third World. Depending on the country and the culture, they sow, plow, weed and harvest. They also carry water for irrigation and play critical roles in the marketing, processing and storage of food and cash crops. That means, say development experts, that if agricultural production is to be increased in developing countries, much of the job literally falls on the backs of women.

Lantern fish, light in the gloom: A protein-short world can look with hope to the lantern fish, according to *IDRC Reports*, a Canadian government publication. "The lantern fish lives much of its life at the bottom of the sea. It is about the size of a sardine, looks like a tiny trout and glows in the dark. But what is really interesting about it is that it is so plentiful—it could become one of the world's biggest sources of protein." Says *Reports:* "The little lantern fish was generally ignored by the fishing industry until recently. Then a Norwegian research ship, sponsored by the United Nations in a program that involves 30 countries, discovered about 100 million tons of the fish in the Arabian Sea. Given that the total world fish catch is less than 70 million tons annually and that the lantern fish is found in all the world's major oceans, the discovery of such quantities of the fish could well lead to radical changes in the fishing industry and a huge new protein resource for the developing world." Studies will be made of the best ways to develop it as a food resource.

What are the basic human needs for development? According to a World Bank report: five years at school; adequate nutrition; primary health care no more than an hour away; family planning services; at least 20 liters a day of pure water per person within 100 yards of home; and a pit latrine.

Correction: The per capita GNP for Honduras is $480, not $480,000 as stated in the June *Agenda*.

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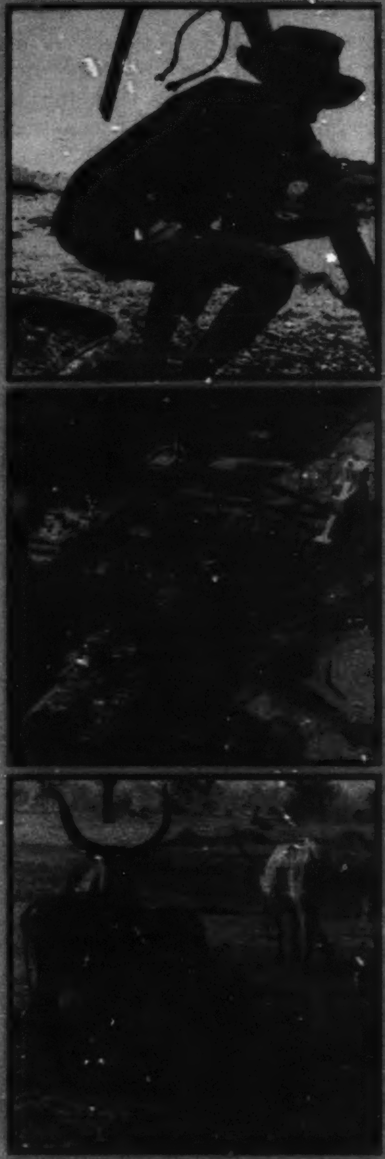

Cover: The United States is becoming increasingly dependent on imports of so-called "strategic" minerals from the Third World. As a nation that consumes 30% of the world's wealth with only 6% of its population, we have a very important interest in the developing nations. See article on page 11.

Cover photo: Gaye Zehl/Pittsburgh Plate Glass Co.

Photo credits: Mary Sebrechts/USDA, pp. 2-4; International Communication Agency, p. 5; National Oceanic and Atmospheric Administration, p. 10; Hamilton Wright, p. 11; Manley, p. 13; Bougainville Copper, p. 14; U.N., p. 15; AID, all others.

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AFRICAN SWINE FEVER STRIKES

A virulent disease, immune to all known vaccines, threatens the Americas.

by Lee Mullane

In 1980 all 1.5 million pigs in the Dominican Republic were rounded up and slaughtered.

It's only a matter of time.

That's what experts are saying about the spread of African swine fever throughout Latin America and even into the United States. The fever, a virus that is both highly contagious and fatal to pigs, devastated herds in Cuba in both 1972 and 1980, in Brazil, beginning in 1978, and most recently in the Dominican Republic and Haiti.

The Dominican Republic last year courageously moved to wipe out the disease by the most effective means it had—by killing all 1.5 million pigs in the country.

Not an easy task by any measure. In addition to the logistics of the slaughter campaign, which took on an almost military precision, the government had to contend with the social aspects of the action. The pig plays an important role in the lives of most Latin Americans; the Dominican Republic is no different. The pig is a major source of protein in the diet; for some it provides the only source of income; and in many instances represents the family savings account. Usually raised with the family, it shares sleeping space in the home, is both a child's playmate and a symbol of the family's wealth. Ultimately it occupies a place of honor—on the table—for the family's most important celebrations.

To order the mass slaughter of pigs might have been to court open rebellion in some countries, but Dominican leaders and swine growers became aware of the hopelessness of living with the swine fever, and the need to deal with it effectively.

Similar to, but potentially more serious than, the hog cholera known in the United States, African swine fever is difficult to detect until just before the swine die. While pigs afflicted with cholera develop clear symptoms ranging from respiratory difficulty to diarrhea and obvious illness, the pig with African swine fever often appears healthy. In some outbreaks, especially in early stages, virtually entire herds have been wiped out quickly before the disease is detected. Later in the outbreak the fever may be more detectable. In killing entire herds of swine, it can also wipe out many a small farmer whose livelihood depends on the animals. Moreover, because no country free of the disease will buy pork from another where swine fever exists, the problem has serious implications for the economy of a developing country whose major exports may include pork.

First known only in Africa, the fever has cropped up in the past few years in Portugal and Spain, where it is now considered endemic. It has appeared in Sardinia, Sicily and Malta. More recently it arrived in Latin America. Experts believe that its ability to jump continents can be traced to the increase in international air travel—and to the garbage discarded from

U.S. pigs have been flown in to restock Dominican herds.

airplanes and ultimately fed to pigs. If the garbage contains even a bit of infected pork, and if it is eaten by another pig, swine fever is the result.

While some countries have taken precautions, specifically the monitoring of the collection and disposal of food scraps at airports, the threat of the spread of the disease to other countries, even the United States, is very real. In fact, according to AID livestock health specialist John Walker, if the fever should show up in even one state, Florida, for example, it could spread rapidly to other states because of overnight transportation to markets and processing plants across the country.

Even the Dominican Republic, after the costly and lengthy task of slaughtering all its own swine, remains vulnerable to an outbreak among any new pigs it should breed. It could happen as easily as an infected pig can walk across the unprotected border from Haiti.

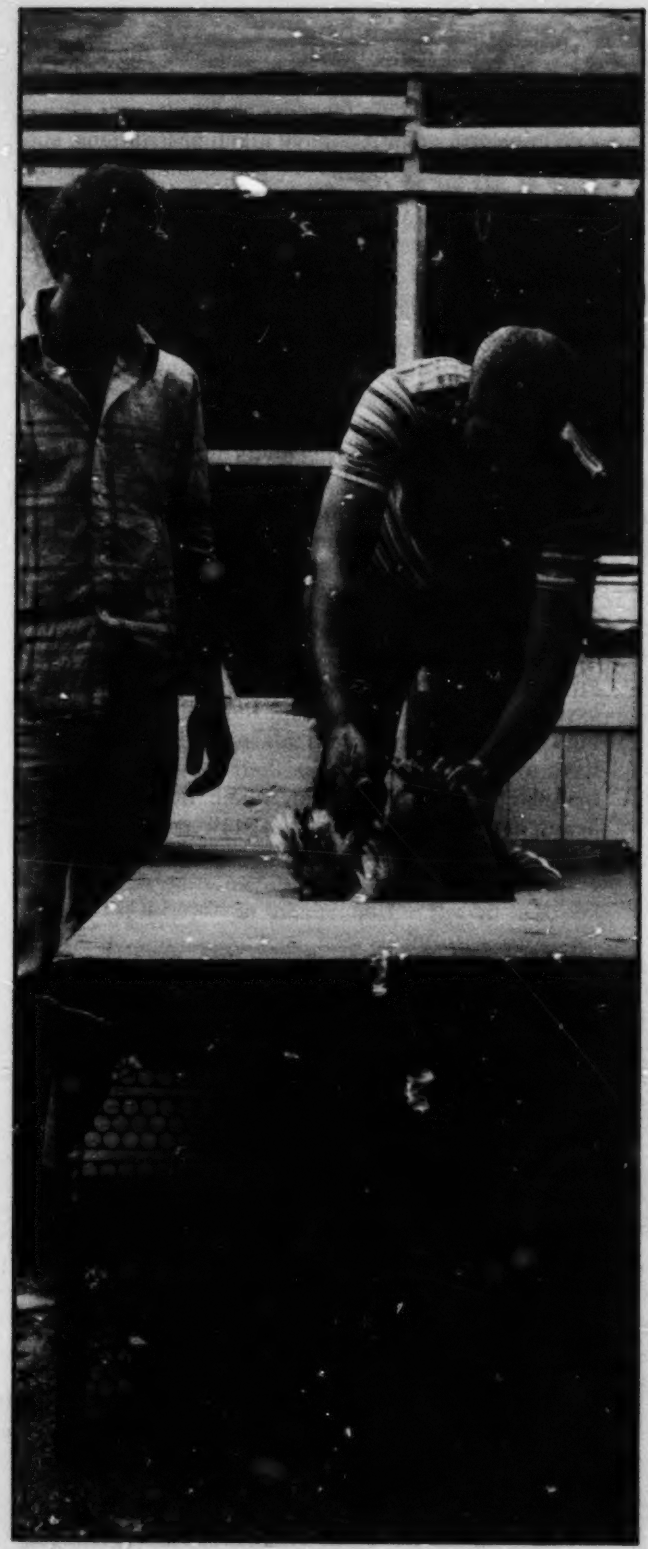
There is no effective vaccine, although researchers have been working diligently to find one. To protect itself in the interim, the United States has tightened enforcement of airplane garbage collection and processing, and of its requirement that all persons arriving from another country declare whether or not they have been on a farm. If so, their outer clothing and footgear must be sanitized. When the boat people began arriving in Florida, that state confiscated and either burned or buried all food brought in.

Every ship that comes into an American port is boarded by a U.S. Department of Agriculture inspector, who scrutinizes and seals the food on board. While in port, the ship's crew must eat American. U.S. officials also have stepped up surveillance of all swine moving through southeastern states. And USDA has initiated special training for veterinarians from the United States and other countries. The training is to better equip the veterinarians to recognize and deal with the disease.

The Dominican Republic wants to rebuild its swine herds. It is off to a hopeful start with the purchase of 800 U.S. swine. They will serve as "sentinels" on monitored farms that experienced earlier outbreaks. If the virus is still present, the sentinels will become infected and die. If the area is clean, they will stay and form the breeding foundation of the nation's new swine herds. The government estimates that it will take up to four years to restore the nation's swine population.

In the meantime, other Latin American countries could take a lesson from the Dominican Republic's pig eradication campaign.

The Dominicans' cooperation was due to a highly effective public information effort that preceded the campaign. Moreover the campaign was marked by



Laying hens replaced pigs as a source of protein and income for Dominicans during its "no-pig" period.

restraint, and by the commitment of the government to fairly compensate each farmer for his pigs—at about 50 cents a pound.

With $226,000 in a grant and a $6 million loan from AID, and proceeds from the sale of a $10,000 government bond, the Dominican government dispatched veterinarians, soldiers, field workers and animal health personnel in "brigades" through the country's eight agricultural regions. The USDA provided a technical advisor to the government. Consultants from the United Nations' Food and Agriculture Organization and additional technical specialists from USDA were also provided as needed. Armed with posters, leaflets, presentations and the like, the brigades persuaded the people either to eat their own pigs themselves, sell them to local slaughterhouses or in local markets, or accept slaughter by the government agents, and receive cash compensations.

In March 1980, the government closed the door to all pork imports in order to force into commercial channels and onto dinner tables all pork that might have been held in storage. By the fall the government officially announced that all the country's pigs had been killed.

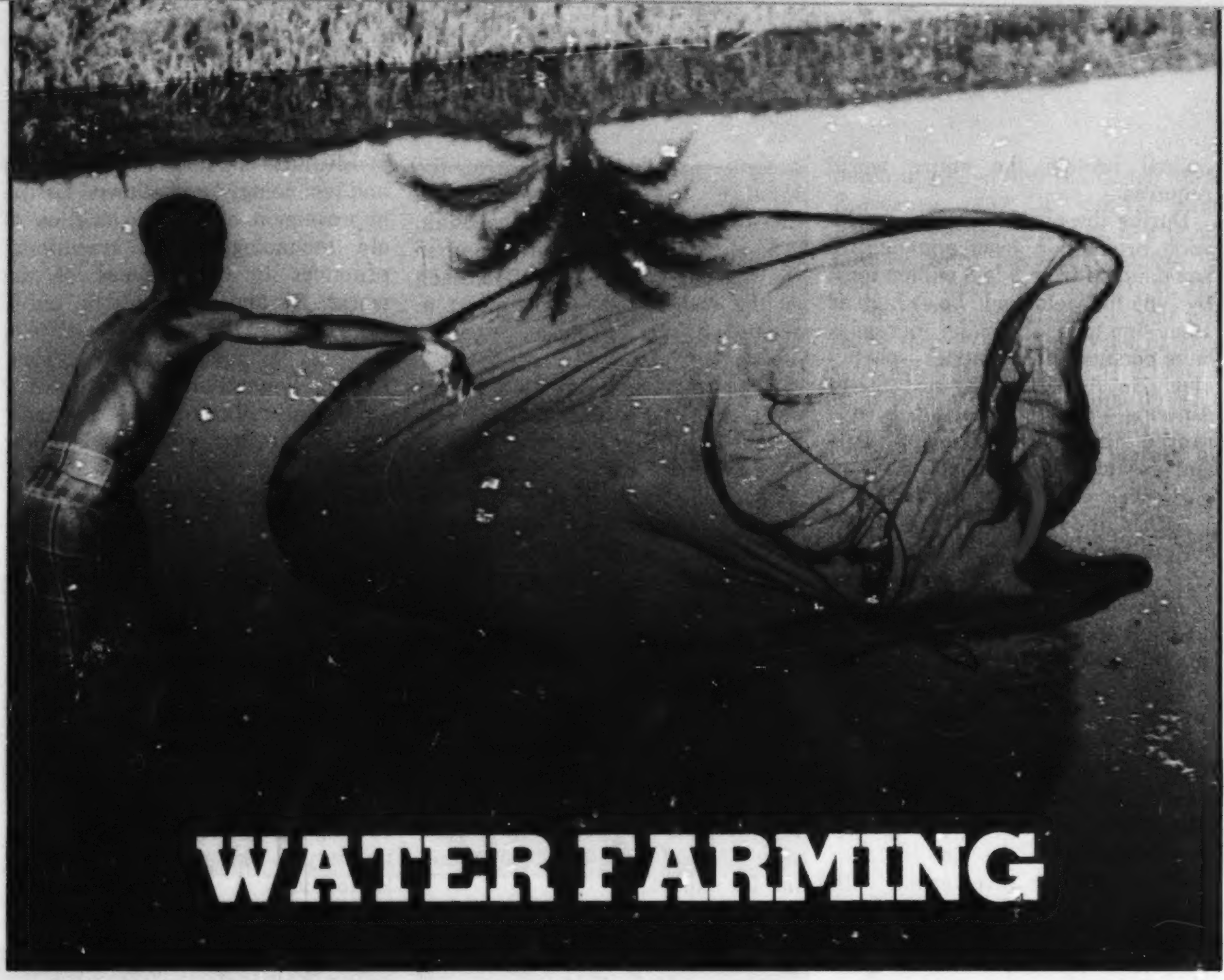
The effort was not without problems. Some farmers insisted that their pigs were sick not with swine fever, but something else, and shouldn't be slaughtered. Others argued that the compensation was short of fair. Further complicating and delaying the effort were two hurricanes that swept the country in 1979 and 1980.

Experts have cautioned against rushing the rebreeding process. The susceptible swine must be constantly monitored for symptoms. Currently a veterinarian visits each sentinel farm to check the condition of the new arrivals. If an animal appears sick and has a fever, the veterinarian takes tissues for laboratory examination and testing. To date no sentinel pigs have become infected with African swine fever.

While they wait for their pork supply to be replenished, the Dominicans eat chicken. The government is importing about 150,000 young chickens a month from the United States for sale to the people at about 25 cents each. In addition, more meat—usually mutton—and fish is being introduced into the Dominican diet.

Last July the FAO started a two-year African swine fever training program for representatives from the Caribbean and Andean regions. It plans to place two veterinarians and two animal health technicians in Haiti.

According to a USDA's animal health official, "for most countries of the Western Hemisphere, including the United States, it is not a question of 'if' but 'when' African swine fever will strike. Hopefully, by working together, most nations will have time to prepare—and contain the disease quickly before it spreads." □



WATER FARMING

Aquaculture promises to fill the food gap for many developing countries.

by Raisa Scriabine

A bas relief found on an ancient Egyptian tomb shows tilapia being fished out of an artificial pond. The tilapia has been an important food source for millennia. It was tilapia that Jesus fed to the multitude almost 2000 years ago.

Today, this lowland fish, common in Africa and the Middle East, is being raised as a food supply in many tropical regions around the world. The tilapia is prolific, hardy, cheap and easy to breed. The current interest in tilapia is only part of a growing re-examination of the ancient art of aquaculture (literally, the cultivation of water) as part of the answer to today's growing world food problem.

Aquaculture—the cultivation and harvesting of food from the sea and from freshwater sources—plants, animals and fish—provides excellent and needed protein particularly for developing countries. Its yields are often more economically produced than animal protein. Aquaculture calls for minimal investment and can be accomplished very near to consumers. The benefits go on: Aquaculture also can contribute to foreign exchange earnings.

Projections for the year 2000 suggest that the number of people without adequate nutrition will exceed one billion. Most of the malnourished of the future, like most of the malnourished today, will be in the developing world. Reliable local food production is needed to meet this anticipated demand. Aquaculture may hold the key.

Controlled aquacultural production is not subject to the economic, environmental and political uncertainties that have hampered commercial fishing. Fishing has suffered from increasing fuel costs, economic marine rezoning, water pollution and large scale mortality of some species. Aquaculture is more resistant to the climatic and geographic factors that affect other forms of food production. For example, estimates show that it is theoretically possible for water resources—rivers, lakes, ponds, oceans—to supply all the animal protein the entire world requires.

During the past five years worldwide production from aquaculture has doubled from 3 to 6 million tons. By 1985 the yield could be as high as 10 million tons. The major increases have occurred in countries—particularly in Asia, Central and South America—where aquaculture has ranked high in development plans and essential investment and support services have been provided.

AID is actively involved in aquaculture projects in tilapia and carp breeding in over 20 countries. AID emphasizes the development of indigenous species to get fresh protein into the back country where it is difficult for people to obtain other food supplies.

On May 5, 1981, Richard Pretto, director of Panama's National Directorate for Aquaculture, received an award for his efforts to establish freshwater fish industries in Latin America. Pretto's involvement with AID in aquaculture is long-term. Five years ago, with technical assistance from AID, Auburn University initiated a fishery program in Panama. Pretto was one of those involved. Later, with AID's help, Pretto came to the United States to earn his doctorate at Auburn. Two years ago, in Panama again, he developed over 200 ponds for tilapia rearing in the province of Veraguas. The ponds produce an average of 700 pounds of fish a year and feed about 7,500 rural families.

In the United States, aquaculture research has been ongoing for more than a century. The impetus was initially to solve problems that would permit the development of hatcheries for restocking species already in demand for recreational or commercial purposes—trout, salmon and oysters, for example. More recently, U.S. aquaculture research has expanded to cover clams, catfish, freshwater prawn, lobster, marine shrimp and other species. This is not surprising since the market for high value shrimp and prawns is on the upswing. After the Iranian caviar export market dropped with the fall of the Shah, U.S. entrepreneurs have turned to rearing caviar-producing fish, such as the paddle fish, in an effort to create a high grade, domestic caviar supply.

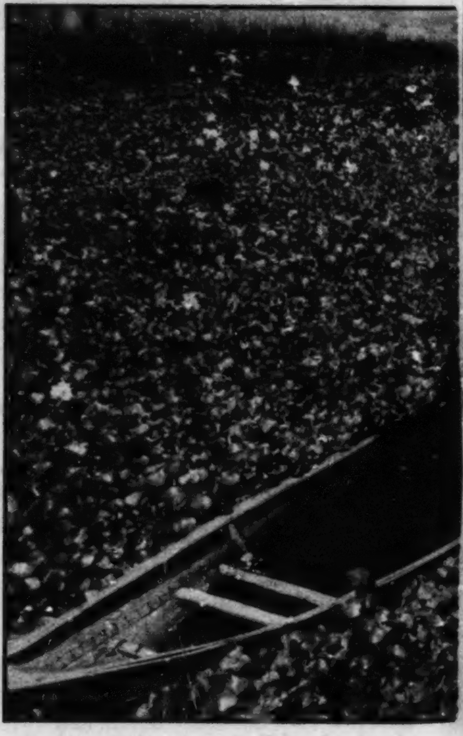
Although aquaculture has potential in this and other developed nations, it provides the greatest potential benefit as a food source in the developing world. Aquaculture can be done almost anywhere. While the major emphasis is on fish farming, plant and seaweed farming are also important. Today, for example, seaweeds are already used as a source of vitamin C, poultry meal, food stabilizers and meat and fish preservatives. Such nations as mainland China, Japan, India, Indonesia, Taiwan, Philippines, Korea, Thailand and Bangladesh produce a major portion of their food from farmed fish, both for domestic consumption and for export.

During the last decade a number of advances in aquaculture research and technology have allowed for the improvement and modernization of old technologies and traditional practices in many areas of the world. By improving design, materials and feed, it has been possible to successfully raise catfish, salmon, trout, yellowtail and milkfish.

The polyculture of fish—the practice of raising several different species in one pond—is an ancient technology still in use in Asia, especially China and India. In polyculture one species of fish will be raised near the surface, another at mid-level and a third at the bottom. Carp culture was widespread in China in 2000 B.C. and was even widely established in Eastern Europe by the seventh century A.D. Experimental work in recent years has given scientists a better understanding of the importance of these systems for rearing various species of carp and tilapia with only modest supplemental feeding.

Attempts at raising tilapia were

Aquaculture has the greatest potential benefit as a food source in the developing world.



A canal choked by water hyacinths could harbor edible fish and plants.

Recent technological advances have boosted the potential benefits from fish raising throughout the world.

made in Kenya and the Congo (now Zaire) in 1937. In central east Africa, the first trials of fish pond culture were made in Zambia in 1942 and Zimbabwe in 1950. In all, Africa's inland fisheries provide more than 1.4 million tons of fish each year.

In Mali and Chad, fish is the second largest export commodity.

In South Asia, where seafood already plays a significant role in the national diet, the potential for commercial, capital-intensive and highly productive aquaculture is much greater than in any other area of the developing world. Recent scientific developments in the Philippines, Taiwan and India have shown that it is possible to increase production in ponds at least tenfold. In parts of Southeast Asia, clams, oysters and mussels are now being farmed and similar shellfish farming in other tropical areas has potential for increasing food supply and employment possibilities.

Many fish that have never been cultivated show great economic potential. One is an intriguing Latin American species found from Mexico to Peru, and known locally as *chame.* The fish has a unique ability to survive out of water for several days, thus offering a simple solution to the problem of transporting fresh fish. It also has few bones, tasty white flesh, and can live in fresh or brackish water. The question of whether or not it can survive in captivity remains to be answered.

Aquaculture can be successfully developed even in semi-arid regions—Brazil's northeast interior is one example. The Brazilian government has built or helped build nearly 6,000 ponds and reservoirs in that region. In 1966, a fisheries research center was established in Fortaleza. Since then, the largest freshwater aquaculture research station in South America was built in Pentecoste, about 50 miles west of Fortaleza. Here research centers on evaluating exotic fish for introduction into reservoirs to increase produc-

Over the years fish protein concentrate has been used to increase the nutritional value of many foods.

tion and on evaluating the potential of several Brazilian fish. Brazil possesses a wealth of fish species, many of which are well suited to rearing in ponds or stocking into reservoirs. The Amazon River basin alone is reported to have 1,300 species of fish. By comparison, there are only 250 species in the Mississippi.

While aquaculture shows promise as a food source, it is not without inherent problems. In developing countries where aquaculture has been practiced extensively for many decades, there has been little incentive to improve production. The increasing scarcity of good land and water puts pressure on pond production. However, because there is a shortage of land and water, there is greater need—and incentive—for using cages and enclosures for raising fish; this means high protein yields in areas where resources are limited. The availability of food—for fish or plants or other marine life under cultivation—is a basic requirement for aquaculture systems. Natural supplies are limited and increasing the stock of some species will not be possible until reliable food sources are available. In developing nations, government encouragement will be necessary to foster aquaculture. Effective fishery management and research organizations are needed as well as people's acceptance of fish as a food.

Before investing in aquaculture, a government must first carefully select the project location. For example, if there is no shortage of animal protein in a given area, there probably is no need for aquaculture. If the water supply is inadequate, or a ready market is not available, the venture may have no future.

The potential of water life as a major food source for tomorrow's hungry is there. And burgeoning populations and growing shortages of arable land, especially in Asia, Africa and Latin America, make the development of aquaculture urgent. ☐

Raisa Scriabine is special assistant to AID Administrator M. Peter McPherson.

Largest School of Sea Animals Spotted Off Antarctica

Scientists studying marine life in the cold waters near Antarctica have reported what could be the largest school of sea animals ever measured—10 million metric tons of shrimp-like krill.

The mass of krill is about one-seventh of the yearly total catch of fish and shellfish in all the world's fresh and salt waters. There were enough krill in this single school to give every person in the United States about 98 pounds of the crustacean.

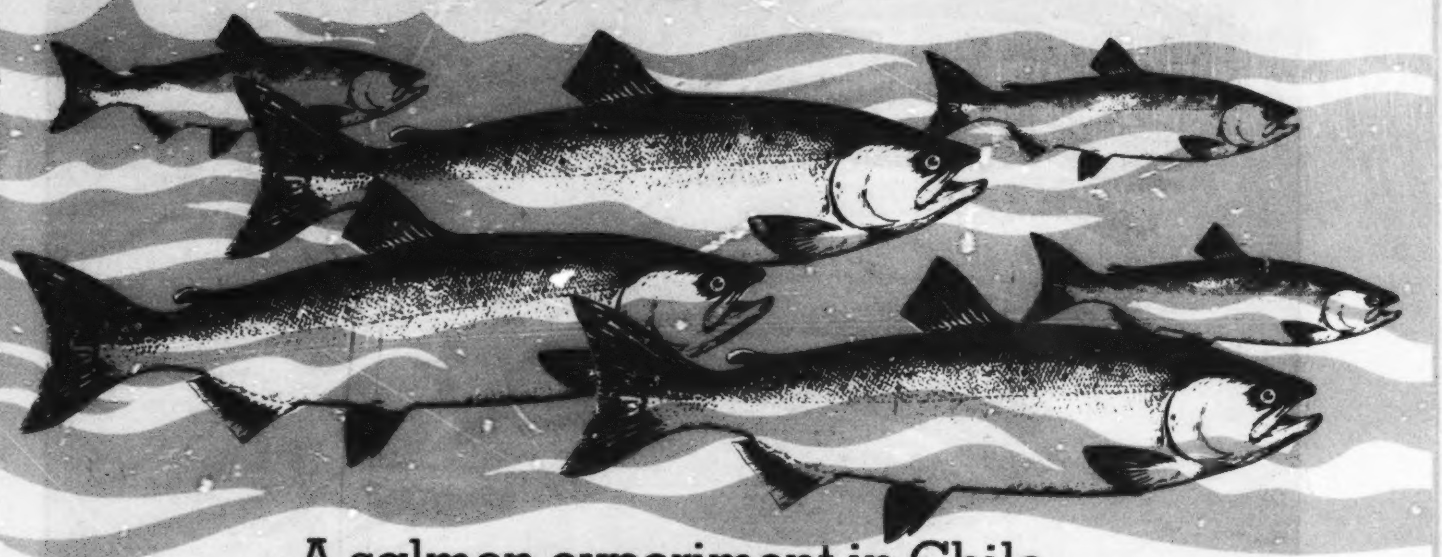
The swarm of krill was measured by acoustical and netting techniques during three days of a research cruise north of Elephant Island. The researchers, working aboard the research ship *Melville*, reported that the krill patch measured several square miles and ranged in depth from about 60 to 600 feet. The 45-day cruise of the *Melville* in antarctic waters was funded by the National Science Foundation.

Two West German and a Polish research vessel worked with the *Melville* in the acoustic-netting studies and exchanged information and data with the Americans. The research is part of a large international study of krill.

Some scientists think the krill, whose scientific name is Euphausia Superba, is a potentially important source of protein for man and animals.

The scientists reported that 35 Soviet trawlers were in the vicinity of the large school.

SALMON: Coming Home



A salmon experiment in Chile seems to be working.

by John G. Blair

The salmon are coming home to spawn—not up the Columbia River of the northwestern United States but back to the freshwater Chilean hatcheries where they have been successfully transplanted. The South American homecoming is a triumph of marine biology that has eluded scientists for more than 75 years.

Domsea Farms, a U.S. ocean ranching firm and Campbell Soup Co. subsidiary, introduced the fish into a southern region of Chile that bears striking climatic and geographic similarity to salmon-producing areas of the Northern Hemisphere. They transplanted fertilized eggs of two species, coho and chinook, from the Pacific Northwest to these South American waters. The fish seem to have adapted well: Thousands of coho fingerlings have been produced from the U.S. fish which returned to their freshwater hatching sites in Chile early in 1980 after a year and a half at sea, and significant quantities of chinook returned to spawn last November after two years.

This is especially good news to Chilean economists, who are eager to cash in on a new export which, unlike copper, is renewable and not subject to replacement by a synthetic. The Americans are enthusiastic, too. The U.S. earned $403.5 million from the salmon last year. Echo soundings by the Chilean Institute for Fishery Development have further encouraged the economists' optimism. Apparently thousands of freshwater channels and rivers in the southern third of the country are teeming with planktonic, galtheid crabs, and excellent food for juvenile salmon.

Before Domsea's success, a private Chilean-Japanese firm had announced plans for ocean ranching in the south. In addition, the Japanese government signed a pact with Chile in late 1979 committing 100 million yen to a five-year joint ocean ranching project. They estimate that within 13 years a facility near Coihaique in southern Chile could produce salmon worth more than $20 million a year.

The Japanese consider Chilean ocean ranches an excellent way to escape international pressure to limit deep sea salmon fishing. Moreover it offers a permanent haven from 200-mile fishing zones. Yet unlike the Americans who succeeded in their first attempt, the Japanese have repeatedly failed to transplant salmon to South America.

Since 1974 they have airlifted more than 11 million chum and a few hundred thousand cherry salmon eggs from Japan to southern Chile. Once the fingerlings reached the migrating or smolt stage, they swam out to sea and disappeared. Not a single Japanese salmon returned.

Timothy Joyner, an oceanographer who was a member of a 1975 Chilean,

American, and British task force that investigated the region's salmon potential, suggests that the young Japanese fingerlings may have become meals for the ravenous brown trout that were introduced earlier in the century. He also speculates that surviving seagoing smolts might have been caught up by a seasonal divergence of the West Wind Drift. If the young fish swam into the northern limb of this flow, they would have been carried into the Humboldt Current and finally to death in the warm waters of the South Equatorial Current. The American fish that survived were larger, and they were released closer to shore.

Stressing the experimental nature of their work, Domsea Farms officials say that it will be years before their operations will be self-sustaining or capable of surviving without continually importing fertilized eggs. However, Domsea recently built four new rearing ponds on tiny Quinchua Island off the eastern coast of Chile's Chiloe Island. The ponds are capable of holding millions of fingerlings. In a move that would give its salmon access to protein-rich krill concentrations of Antarctica, the company also obtained Chilean government permission to develop several sites near Fuerte Bulnes, close to the Strait of Magellan.

Just how these developments will affect Chile remains uncertain. But salmon does not need to be a high-priced food bred only for gourmet palates in Tokyo and Washington. The fish was once common in the diets of Northern Hemisphere coastal residents. Someday Chile's new natural resource could become a mainstay of the Chilean worker. ☐

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Strategic Minerals and the Third World

by Georgia Sambunaris

Taking them for granted could be dangerous to our way of life.

Why all the fuss over "strategic" minerals? Who needs them?

We do! Imagine a car without a starter switch, a jet plane without an engine, a TV set without a picture tube, a computer without a memory, a Fourth of July without fireworks, a new house without insulation.

We take for granted these and other necessities and conveniences so familiar in and critical to our lives. How many of us stop to think where we get the strontium, beryllium, chromium, columbium, cobalt and rutile that go into making these items?

They do not necessarily come from Alabama or New York, or from France or Germany. While some important resources do come from U.S. reserves and from allies, this country is becoming increasingly dependent on imports from the Third World. We rely on foreign sources for 24 or 32 so-called "strategic" or "critical" minerals.

As of 1979, the United States imported all of its graphite (crystalline flake), ferrocolumbium and natural rubber and more than three-quarters of its strontium, tin, bauxite, zinc and cobalt from the Third World. The countries of Africa supply the world with 67% of its refined cobalt, 61% of its gold, 45% of its platinum metals and 70% of its diamonds. Central America and the Caribbean produce 45% of the world's strontium. Eighty-two percent of the world's columbium comes from South America.

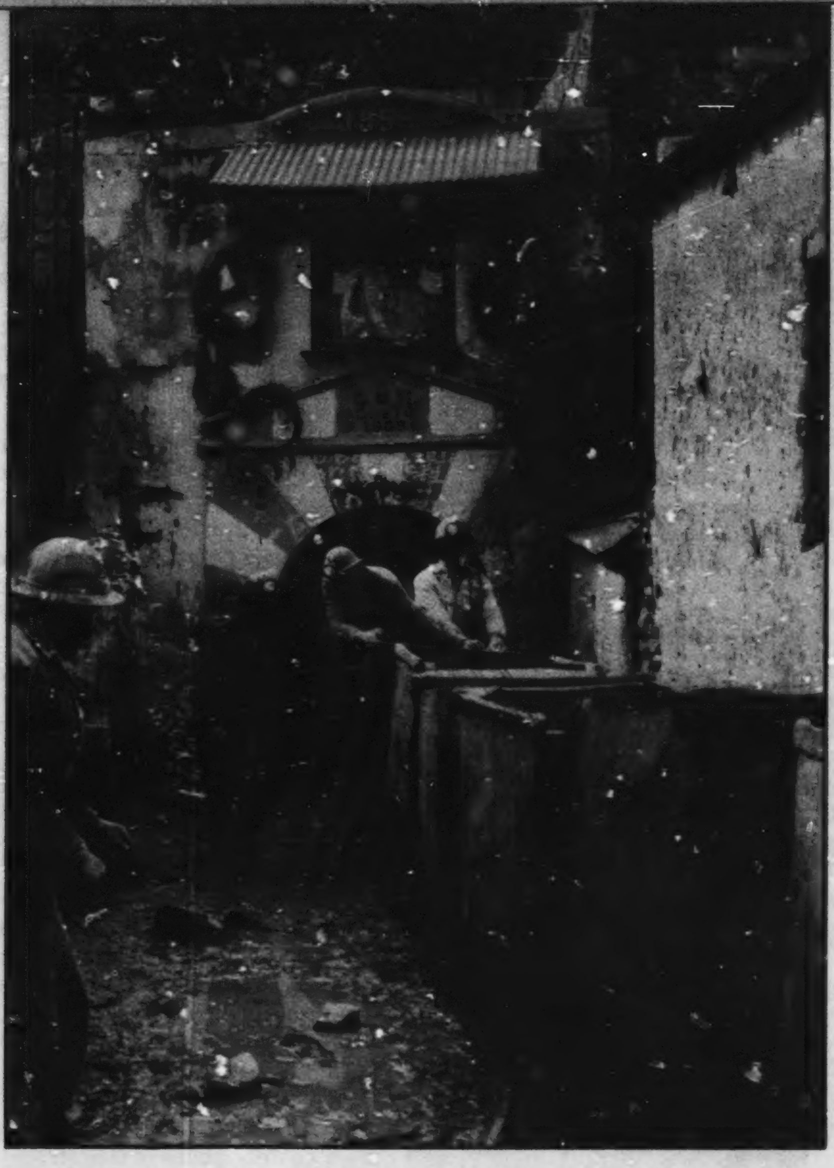
Most Americans realize that the current energy crunch is largely due to our dependence on imported oil. But few realize that imports of other minerals also affect their homes, families, vacation travels and work.

Tonight, when the evening news comes on, keep in mind that the strontium used in making the glass for your color television picture tube probably came from Mexico. Remember that the fireworks you oohed and aahed over on July 4 contain strontium. Next time you travel by plane, train or car, think about the cobalt used in the engines—it came from Zaire and Zambia. Graphite, used in auto brakes and in the lighter-than-aluminum airplane bodies, is imported from Madagascar and Brazil. The silver in photographic films and supplies is shipped mostly from Peru, Mexico, and Chile.

Since we are dependent on other, sometimes not too friendly countries for minerals and natural resources, what are we doing to make sure we don't run out or run short of them? In a recent World Affairs Council report, "The Resource War in 3-D—Dependency, Diplomacy, Defense," 16 experts note the serious threat of inadequate supplies of U.S. strategic minerals.

They suggest that the United States needs to better coordinate its resource needs with its domestic and foreign policies. They cite U.S. government environmental, safety and health regulations as preventing effective competition of the U.S. mineral industry with foreign mineral firms.

Daniel Fine, at the Massachusetts Institute of Technology's mining and mineral research facility, presents additional evidence for U.S. concern. He contends that the Soviet Union has engaged in a resource war with the United States. He claims the Soviets have shifted from their traditional policy of mineral self-sufficiency and raw material export to the Western world to a policy of



Aymara Indians mine raw tin ore in Bolivia.

"strategic resource dependency." Fine points out that the Soviets are expanding their military activity to project power in their competition for Third World energy and minerals.

"The Soviet invasion of Afghanistan serves as one example of where Soviet military infiltration assured mineral resources," Fine states. The invasion of Kabul insured the Soviets an "estimated 500,000 tons of resource potential to supplement lower-grade Soviet materials." The resources include oil, gas, coal, chrome, iron ore, copper, bauxite, beryl and fluorspar. The Soviets have also gained access to mineral sources in other developing countries through technical and economic assistance projects for mineral development, he points out.

How does this affect the United States? For one, more countries are competing for the same resources, causing prices to skyrocket and straining supplies. Western European countries and Japan depend on Third World mineral exports even more than the United States. An example of how prices are affected: When Cuban-trained troops invaded the Shaba province of Zaire in 1978, cobalt mining was halted for months. The price of cobalt shot up from $6.85 to $50 a pound.

A second danger lies in the vast concentration of strategic minerals in unstable geographic regions. More

than half of the world's cobalt reserves are in Africa. Belgium and the United Kingdom, nations friendly to the United States, export cobalt to this country, but their supplies originate in Zambia. Fifty-five percent of the cobalt this country needs comes from Zambia, which is bordered by Mozambique and Angola. All three countries are host to military stations of several nations hostile to the United States—Cuba, East Germany and the Soviet Union.

Finally, the United States is forced to exploit its limited domestic mineral resources while the Soviets maintain an undeveloped Siberian stockpile.

A study by the Brookings Institution presents another, much more optimistic view. "Trade in Primary Commodities: Conflict or Cooperation?" suggests that the world will not have increasing shortages of primary commodities despite increased competition. Economists from Japan, Europe and North America explain that world mineral reserves have grown along with consumption. Since mineral exploration and tests are

The power house, sinter plant and storage area shown are critical to this manganese mining operation in Ghana.

costly and an increase in stated deposits increases a company's tax liabilities, they claim that proven reserves are understated. Therefore, for example, as economic expansion took place between 1950 and 1970, "iron ore and bauxite reserves grew by more than five times, nickel by more than three times and copper reserves more than doubled."

The Brookings study also denies the possibility of OPEC-type cartel for critical minerals and lists factors of a successful cartel: high demand, lack of substitutes, an export market and limited supply. Importing countries can always turn to recycling scrap or other alternatives. Furthermore, it continues, political and economic diversity between mineral-producing countries hinders any long-term success of certels. Attempts at mineral cartels go back to the late 1960s, but these attempts have failed, mainly because of political differences and negative long-term impacts. Cartels for copper, mercury, sulfur and nickel have had only short-term success. The need for most countries to maintain relatively liquid foreign exchange earnings also thwarts attempts to formulate cartels.

One fact that cannot be challenged is the weakened competitive edge of the U.S. mineral industry. Environmental and safety regulations requiring large expenditures of capital for pollution control and safety equipment; high or floating interest rates on capital financing; costly processing required by low-grade U.S. minerals; insufficient tax incentives; and employment rules and restrictions—all have contributed. The result: Many domestic mineral processing firms are moving overseas, increasing U.S. mineral dependency on foreign sources. One thing on which studies agree is that such dependency has a negative impact on U.S. foreign policy.

Part of the answer to the problem is stockpiling. In 1939, legislation was passed to set up stockpiles of strategic and critical materials for national defense. Because of inadequate U.S. mineral supplies during and after World War II, Congress revised the act, calling for larger

Once copper is mined it is refined by an electrolytic process.

Copper concentrate for export is loaded at the rate of 1,200 tons per hour at Bougainville Copper's port in Papua, New Guinea.

stockpiles and developing U.S. sources. The 1946 Stock Piling Act provides up to a three-year stockpile of each of 93 materials. Eighty of these materials are mineral and 13 agricultural, such as grain, castor oil (used to make nylon; mainly imported from Brazil) and opium (being stockpiled for medical purposes in the event of nuclear war, according to the Federal Emergency Management Agency; imported from India and Turkey).

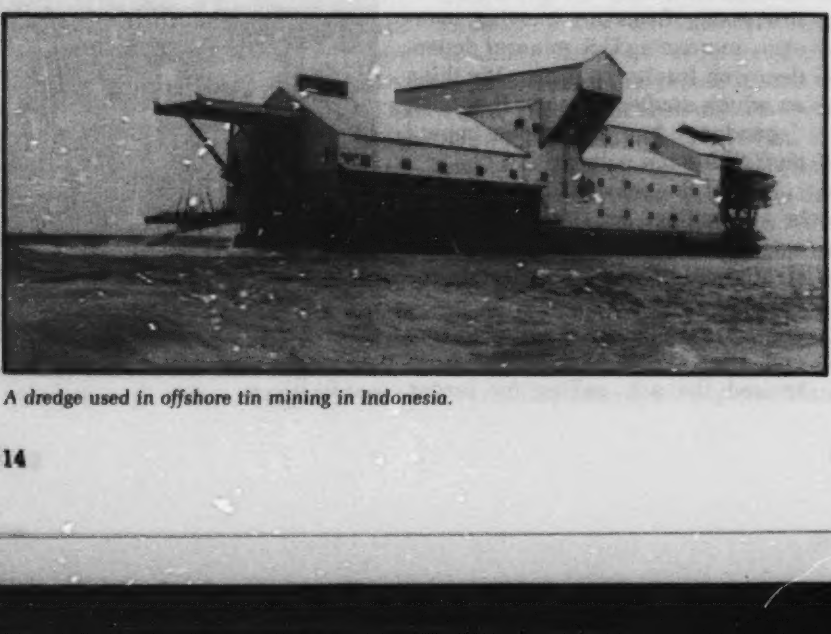
Some of our most important minerals, where they come from and what they're used for:

Bauxite: 88% of what the United States needs comes from the developing countries, mainly Jamaica and Guinea. The rest is mainly mined in Arkansas. Used in the production of alumina, airplanes, abrasives and refractories. The U.S. stockpile goal is 7.1 million tons. Current inventory is half that amount.

Beryllium: Brazil is the major supplier, followed by the People's Republic of China and Rwanda, a tiny African country. U.S. domestic production started in Utah in 1969, but imports still account for 74% of U.S. needs. The major use of beryllium is as an alloy with copper for electronics, computers and communications equipment. It is also used in the aerospace industry—in missiles, aircraft, satellites and space vehicles. The strategic stockpile goal has almost been met. Another optimistic factor about beryllium supplies is that the United States expects to meet its own demand by the year 2000.

Cobalt: The United States imports 94% of its cobalt; more than 75% comes from developing countries, mainly Zaire, followed by Zambia and Belgium. Idaho has the only high-grade cobalt ore in the United States, but its mines were closed in 1959. All domestic mining of cobalt ended in 1971. Cobalt is used as an alloy in marine equipment, jet engine parts and industrial turbine engines; in magnets for loudspeakers and telecommunications equipment; and as a soil fertilizer. The stockpile is only halfway met.

Columbium: The United States is 100% dependent on imports; Third



A dredge used in offshore tin mining in Indonesia.

U.S. tin stockpile.

World countries such as Nigeria, Brazil, and Malaysia supply more than half. Brazil is the sole supplier of ferrocolumbium imports. The United States consumes 20% of world columbium supplies. It is used in steel beams and girders for buildings and offshore drilling towers, special industrial machinery, oil and gas pipelines, railroad equipment, cars and ships and by the nuclear and aerospace industries. Colorado's Gunnison County is the largest potential domestic site for columbium mining, but processing makes it more expensive than imports. The stockpile goal is half met.

Tantalum: Developing countries supply the United States with about 46% of its need. Uses include production of electronic capacitors, metal-working machinery such as cutting and farm tools, chemical equipment and nuclear reactor components. It has not been domestically mined since 1959. The present stockpile goal is 7.16 million pounds, current inventory is 3 million pounds.

Copper: Rapidly becoming the 25th strategic mineral upon which the United States is dependent. Two-thirds of U.S. needs comes from the Third World, mainly Chile and Peru.

The Federal Emergency Management Agency (FEMA) manages stockpiles in 116 locations throughout the United States. Estimated value of the stockpiles is $18.7 billion. The stockpiling program has limited congressional support because of its cost. Some experts say that the price for completing stockpile goals will be as much as $6 billion. $100 million was appropriated for fiscal 1981, but according to Robert Mroczek at FEMA, the agency expects funding for stockpiling to increase.

There is concern, albeit limited, about what Secretary of State Haig refers to as "the era of the resource war." James Santini (D-NV) chairman of the House Subcommittee on Mines and Mining, cautions that we are in "a post-Iran, hostage-terrorist world in which some mineral producing countries have nationalized foreign mineral interests and have threatened to deny raw materials if their economic and social demands are not met."

Last September, the subcommittee called for several changes in present U.S. mineral policy including antitrust laws; consideration of future mineral production before land classification is adapted; accessibility of federal land for domestic mineral production; U.S. support for research and development; and Defense Department involvement in mineral policy.

In 1977, Sen. James McClure (R-ID) introduced a bill that set stockpiling goals based on U.S. import dependence for each material. There was also a requirement that any funds received from stockpile sales be used for future purchases of stockpile material. Several amendments, however, prevented the bill from passing.

A "barter clause" in the 1974 Foreign Assistance Act gives the President the power to barter foreign assistance in "exchange for a necessary or strategic raw material."

The United States is faced with the problem of developing a cohesive domestic and international mineral policy. Obviously, as the experts point out, we cannot afford to put off action until a crisis evolves—U.S. domestic and international mineral sources are too insecure and unstable. They insist that if U.S. defense capabilities and the U.S. economy are to improve, critical and strategic minerals must be readily available.

Santini points out it takes 10-20 years to start production from the time of initial discovery of a mineral, yet the federal government continues to restrict domestic mineral exploration through capital financing and environmental regulations. As a nation that consumes more than 30% of the world's wealth with only 6% of its population, the United States has a very important interest—its security and its economy—in the Third World. □

Georgia Sambunaris is on the legislative and public affairs staff of the International Development Cooperation Agency.

HOLDING THE SAHARA AT BAY

The Senegal River may stop the flow of sand, and answer critical food shortages.

Extracting the river's water fo use on farms.

A look at a 1930 map of West Africa reveals that the Sahara Desert stretches 75 miles farther south than in 1973.

The shifting sands are part of a series of events that included a devastating drought in the late 1960s and early 1970s, which killed thousands of people and animals and left the area known as the Sahel economically crippled. As increasing food shortages continue to threaten the lives of people in the Sahel countries, planners are turning with growing urgency to irrigation to produce more food.

The virtually untapped river basins in the area offer a means to that end. One of the major rivers is the Senegal, part of which forms the north-south border between Mauritania and Senegal. Senegal's eastern neighbor is Mali, through which the Senegal River flows for nearly 400 miles.

The Senegal River Basin is particularly critical for the area's development because it runs through several different climatic zones. Rainfall averages from 12 inches during the July-September period in the north, to 80 inches during May-October in the south. By the end of the dry season, surface flow often disappears. Result: extreme variations in rainfall and consequent flooding and runoff, making it difficult if not impossible for farmers to plan.

Although local farmers have ways of planting that minimize losses during flooding, production has been low. The area that is planted varies from 25,000 acres to 247,000 acres each year, depending on the extent of the floods at any particular time. And, while farmers are not unfamiliar with irrigation, controlled irrigation is a new concept.

Experts believe that with proper control, the Senegal can provide irrigation for as many as 1.6 million people—14% of the population of the three states the river borders or passes through. There is no disagreement that harnessing the river can help turn about declining per capita food production. During the 15 years between 1960 and 1975, the region's population grew at 2.6%, exceeding the 2.3% growth of food production.

AID, which has become increasingly interested in helping the Sahel countries (Senegal, Mali, Mauritania, Niger, Cape Verde, Gambia, Upper Volta and Chad), has been working along with other donors, on development projects in the Senegal River Valley.

Within Senegal, AID is supporting the Senegal government's efforts to achieve a more diversified agriculture, moving away from heavy dependence on one crop—peanuts—and producing more rice. The danger of overdependence on one crop was shown last year, when less than 400,000 tons of peanuts, about half the normal yield, was harvested. AID is especially interested in irrigated agriculture. Controlled irrigation means that farmers will not have to rely on the whims of weather as they did last year when the rains came to Senegal nearly six weeks late, causing some rice as well as peanut shortages.

AID funding for the Senegal government's Society for the Development and Exploitation of the Land of the Delta (SAED) consists mainly of training for SAED staff associated with the management, operation, maintenance and repair of agricultural and heavy and light equipment and vehicles. SAED has been successful in bringing 27,000 acres of land along the Senegal and a tributary under cultivation, mainly in rice.

SAED projects cover areas from 20 to 1,000 acres. AID support has been for the smaller areas, mainly in the upper river valley on the border between Mauritania and Senegal. One of the areas being developed is Bakel. Irrigated farming techniques are being introduced to 24 villages with more than 30,000 people.

The project is a direct result of actions taken by a farmer in the village of Koughani. The story is somewhat akin to a fairy tale with a happy ending. While traveling in Europe, the farmer observed the agricultural methods being used there. When he returned to his village he bought a pump and a rotary tiller. But because of insurmountable technical and logistical problems, including lack of fuel, spare parts and mechanics, his equipment couldn't be used. He realized that if he and other farmers were ever to produce enough food they would need expert assistance. He wrote an official in a French agency whom he met when he worked in France. The organization, short on funds, contacted various donors and private voluntary organizations and succeeded in getting two British agencies to provide initial financing.

Extension activities in Bakel grew. SAED provided pumps and technical advice, and AID pitched in with pumps, tools, technical expertise and studies.

The first harvest of rice, corn and vegetables, with rice yields much greater than previous harvests, was impressive. Food production increased by as much as 68%, marketable surplus by as much as 23%. The two major ethnic groups in the area until now have farmed according to the traditional rainfed practice dictated by their cultures. But more and more Bakel farmers are asking for their fields to be irrigated. They recognize that their risks—variability in rainfall, pest damage and limited storage capacity—are lowered through water control that reduces yield variation and increases average yield, hence boosting income.

AID technician Khoi Le is quick to credit farmers' involvement in the project. He reports the men and women have organized in "groupements," or production units. Most of the groups manage collective farm plots as well as individually owned ones. Money earned from village fields pays collective debts before being divided among the workers.

Because diesel pumps are expensive to run and maintain, an experimental solar-powered pump project will join the on-going and proposed activities to develop the river basin. Initial costs will be high, but as it goes into full operation and as farmers are trained how to use it and keep it in good shape, it may well offer an attractive alternative. By next year's planting season, the solar pump will be irrigating 120 acres.

Increasing attention is being paid to integrated development of the Senegal River Basin and to utilizing the finances and efforts of many donor nations and organizations. A number of donors are providing funds for construction of two dams, a multipurpose upstream dam at Manatali and a low dam at the mouth of the river at Diana to prevent salt water intrusion. When these dams are completed, nearly 800,000 acres could be open for irrigated agriculture. In addition, the dams will provide electricity and make the Senegal River navigable to Kayes in Mali.

Although AID is not helping finance the dams, it has been involved in the efforts of OMRS, the river development organization of Senegal, Mali and Mauritania. It assessed the environmental effects of the dam construction, is carrying out aerial mapping of the basin and has supported a socioeconomic study and agronomic research. AID is now developing a multiyear integrated development plan to help the countries and people of the area realize the benefits from the dam. The project will include improvements in food and livestock production, crop diversification, resettlement of people displaced by the construction of farm-to-market roads and monitoring of health changes in the area.

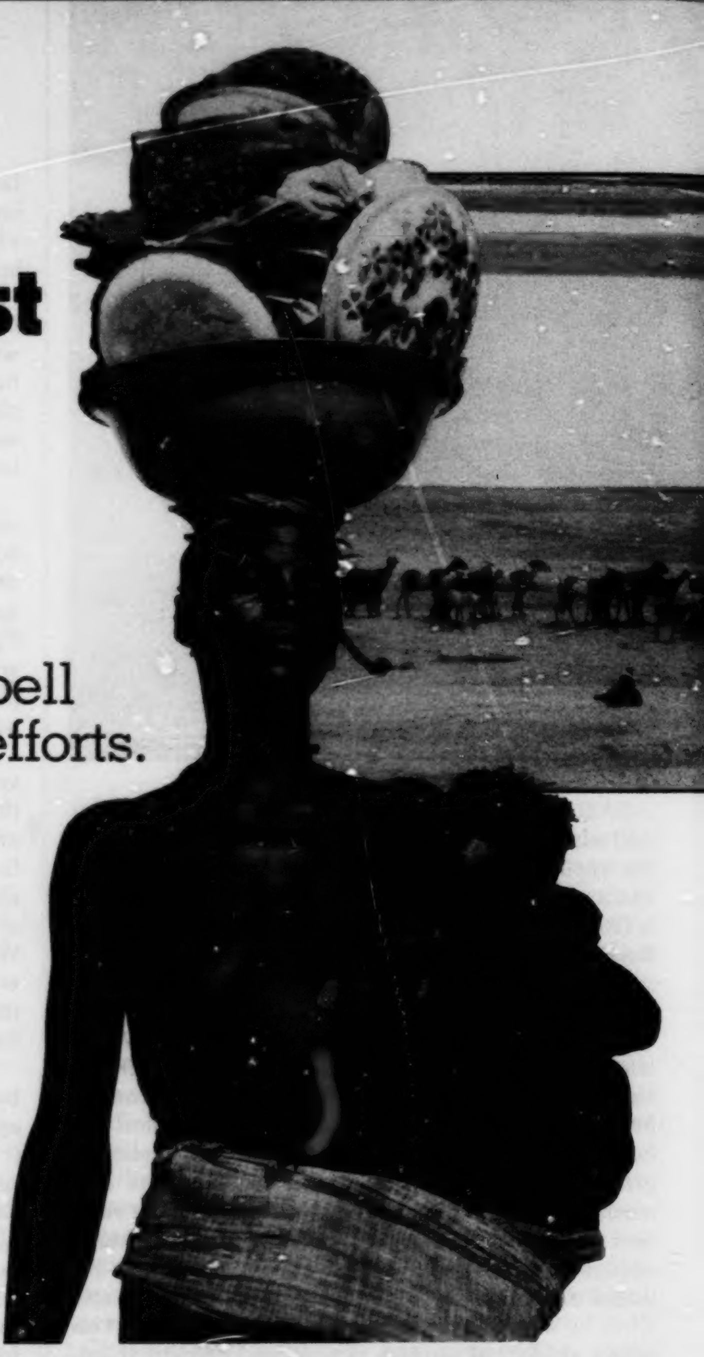
It is hoped that this project will help the people of the Senegal Valley eventually produce enough food to eat, with a surplus to sell. In addition, it is expected that feasibility studies, done as part of this project, will lead to major multidonor projects that will increase the ability of countries of the Senegal Basin to meet their mutual development goals. □

Contributing to this article were Linda Worthington of AID's Mission in Senegal and the AID Senegal Desk in Washington.

The High Cost Of Recovery In the Sahel

by Arthur M. Fell

Recurrent costs could spell doom for development efforts.



For many years development practitioners have known that the failure of governments to meet operating and maintenance expenditures is the cause of many project failures. Dilapidated schools, hospitals without drugs, abandoned irrigation installations, impassable roads, immobilized trucks and tractors and the like are not uncommon in developing countries. An accumulation of such project failures calls into question entire investment programs and the result is poor economic performance. Yet, until recently, development administrators and academic economists paid astonishingly little attention to the problem of "recurrent costs." It has been no different for the countries of the Sahel.

The Club du Sahel was launched in 1976 to help the Sahel countries of West Africa, victims of drought, promote and harmonize their policies and interests. Besides helping to mobilize resources to achieve regional food self-sufficiency, the Club has studied and acted on key issues in such areas as energy and cereals policy. In 1976, the organizers of the Club du Sahel hoped that the Club would encourage donors to provide more concessional assistance. As it has turned out, it has been extremely successful on this count. Concessional commitments to the Sahel rose from $755 million in 1976 to $1.7 billion in 1979, more than a 50% increase in constant terms and more than three times the per capita level of increase registered by the rest of Africa.

However, the planners of the Sahel program foresaw that, as more resources flowed into the region, numerous new projects with claims on national budgets would be initiated. Given the tendency of donors to finance projects often for only three to five years, usually underestimating the time it takes to set a project in motion, it became evident to the planners that Sahel governments were going to incur increasing and recurring costs to keep those new projects maintained and operating. A problem of "recurrent costs" of some magnitude was brewing.

Thanks to the foresight of the Club

du Sahel, whose membership includes the United States, France, Netherlands, Switzerland, Canada, the European Development Fund and other donors as well as the Sahel countries themselves, a wide-ranging study of the recurrent costs in developing countries has been carried out; the study focuses on the Sahel Development Program.

The Brandt Commission Report refers to the Club du Sahel as a new form of organization for regional planning and financing in developing countries. The Club, says the report, enhances mutual trust, increases the likelihood that projects will be carried out, and increases the countries' ability to put grant or loan funds to work. The organization of the recurrent cost study by the Club du Sahel illustrates how the Club deals with overriding development problems that are beyond the capacity of donors and Sahel countries acting alone.

To do the study, the Club formed a working group on recurrent costs so that representatives of Sahel governments, donors and consultants could pool their efforts to diagnose the problems and propose recommendations. Financing for this came from several sources. AID provided funds to engage the Harvard Institute for International Development (HIID). Canada financed work by the Center for Research in Economic Development at the University of Montreal. The French, Dutch, Swiss and Belgian governments paid for consultants' salaries or assigned experts to work on the study. The International Monetary Fund, the World Bank, the European Development Fund and the OECD participated. Sahelian consultants were recruited to work on various aspects of the study. And most important, Sahel governments assigned their officials to work alongside the others. The working group succeeded in drafting a plan which called for work on both the project level and on national budgets.

On the project level, the working group made field analyses of 29 development projects in agriculture, rural water supply, livestock, fisheries, forestry, health, education and transport infrastructure. On the national level, the budgets of all eight Sahel countries were analyzed.

The final product was the result of close international cooperation between donors and Sahelians.

The working group investigated the concept and definition of recurrent costs and distinguished recurrent costs from economic costs. It analyzed the recurrent cost coefficient (or "r" coefficient), a ratio that says, for example, that the annual maintenance costs of a building equal X% of the building's original cost or, to take another example, that teacher salaries and other operational costs represent Y% of a school's original construction cost. This ratio is a tool used in analyzing recurrent costs but its calculation involves certain difficulties and it varies between sectors and countries.

In its report, the working group points out that using and maintaining resources optimally does not mean following any given project design rigidly.

Using the analytic tools and information developed by such technical studies, the working group found that in 1982 the countries of the Sahel would show a deficit of $180 million. This deficit represents the difference between expenditure commitments for public programs and planned receipts (Chad was not included in this calculation because of conditions there). This estimate assumes that projects will be operated and maintained according to design and that policies of both recipient and donor countries stay the same.

Either the deficit will be made up by short-term balancing funding or it will not, and to the extent it is not, projects will suffer. The working group reviewed the policy options available to reduce the estimated deficit both on the revenue and expenditure side.

With respect to increasing revenues, it found little room for maneuvers to increase taxes. (However, in some cases the possibility of replenishing coffers may exist through user fees.) The group recommended that policy discussion should focus on expanding the tax base. This would involve review of three government policies: the tendency of the public sector to absorb critical manpower and capital; overcoming suspicion of the private sector; and underevaluation of the cost of capital and foreign exchange.

On the expenditure side, the government's obligation to guarantee public sector employment to secondary school graduates, and to finance deficits of public enterprises, act as severe constraints to reducing expenditures.

The working group found a series of problems. For instance, it may take as long as 15 years for an integrated agricultural development project to achieve an effective cost-benefit return. The impact of recurrent costs is either not estimated in project design (in fact, few project papers consider this issue properly) or is substantially underestimated. Frequently there are other errors in conception or execution. Unsuitable or inadequately tested methods have been introduced; supervisors have been poorly selected. The time needed to start a project is grossly underestimated. Projects have been carried out on too large a scale. Obviously, the economic and social costs of failure are higher when projects concern large numbers of people. There is a tendency to try to keep projects alive when they have proved to be failures.

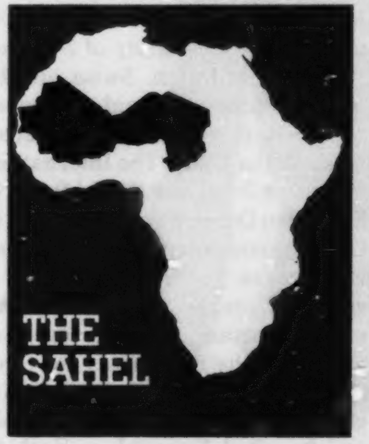
Based on its study, the working group put forward 21 recommendations to the Sahelian governments, international finance agencies, the CILSS and Club du Sahel. They call for increasing the Sahel countries' real tax base through broad, national policy reforms that accelerate the growth of private sector production, improvement of project preparation and implementation procedures, increased efficiency of recurrent expenditures, introduction of cost recovery procedures based primarily on user charges, reorientation of transfer mechanisms for public development assistance; and support by donors for macroeconomic policy reforms by Sahel countries.

The Club du Sahel and CILSS are continuing to work on the recurrent cost problem with the support of the International Monetary Fund and the World Bank. A work session, scheduled for November, 1981 in Ouagadougou, Upper Volta, is in the works. There, Sahelians and donors will try to determine further steps to put the recommendations to work. Already, all are giving more attention to the problem of recurrent costs in project designs.

At the least, one can say that in the Sahel Development Program the issue of recurrent costs has not been brushed aside. The study represents a uniquely collaborative effort by the international community and Sahelians. Difficult policy issues for donors and Sahel countries have surfaced. Solutions to such problems are not easy. But if defining a problem is half the solution, clearly a good beginning has been made.

The full title of the recurrent cost study is: "Recurrent Costs of Development Programs in the Countries of the Sahel—Analysis and Recommendations," August 1980, Club du Sahel/CILSS. A limited number of copies of a summary of the study is available from: Secretariat, Club du Sahel, OECD, 2 rue Andre-Pascal, 75775 Paris Cedex 16, France. ☐

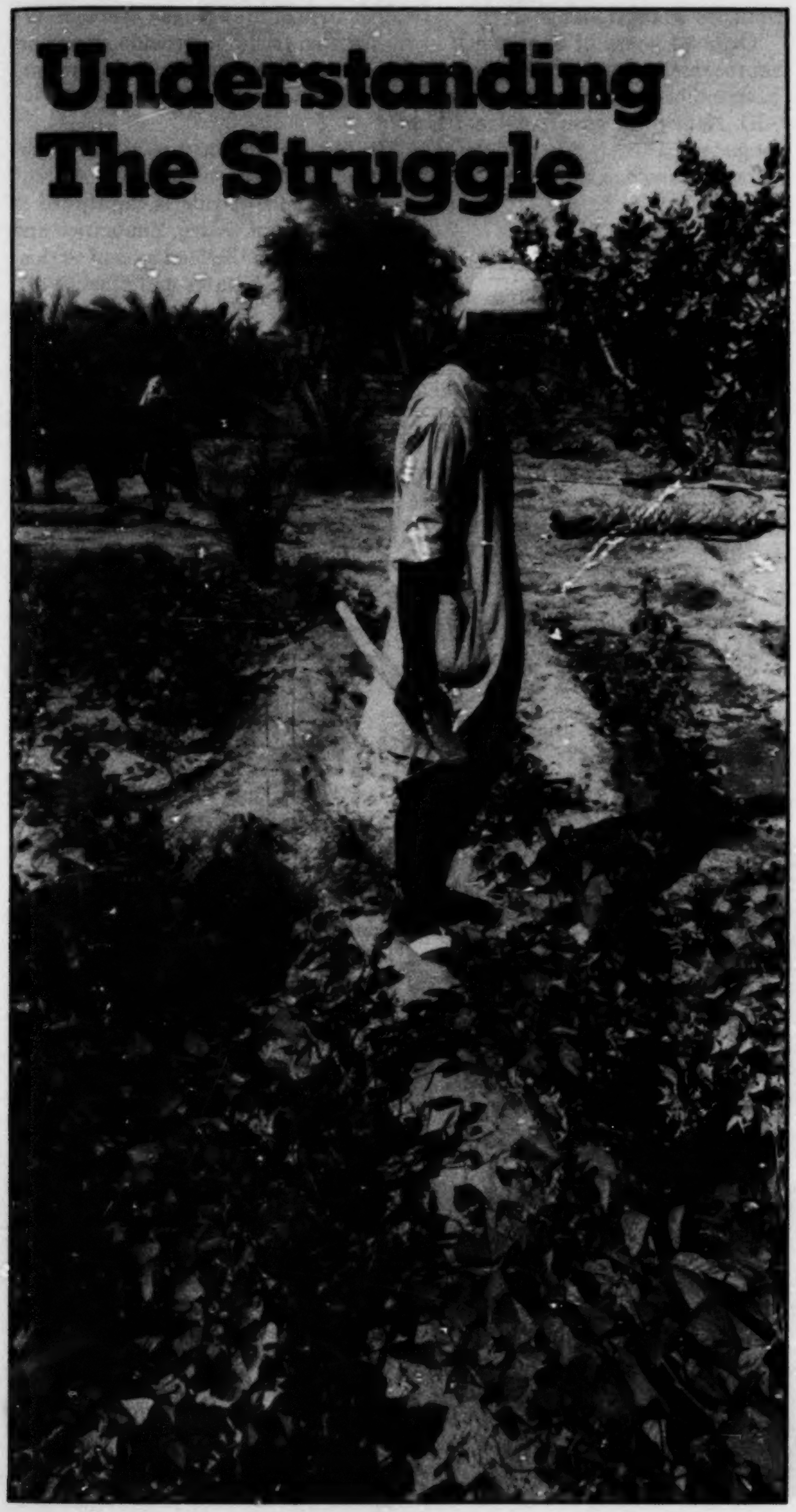
Arthur M. Fell is the U.S. representative to the Club du Sahel and OECD.



The Sahel region is composed of the West African nations of Cape Verde, Chad, Gambia, Mali, Mauritania, Niger, Senegal and Upper Volta. Although poor, it has considerable untapped potential. Per capita GNP averages only $200. The region has a total population of about 30 million and is about two-thirds the size of the United States. Sahelian countries share common physical and economic characteristics—low and variable rainfall; an economy based on agriculture; limited industrial opportunities; exports concentrated on livestock, cotton and groundnuts with export earnings falling behind the rising costs of imports.

After the serious Sahel drought peaked in 1972-73, the Sahelians and the international community organized for the long-term development effort needed to avoid disastrous effects in future droughts. They created the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and the Club du Sahel to plan, coordinate and promote a development program for the region focused on the goals of food self-sufficiency with ecological balance and self-sustaining growth, all by the year 2000. A strategy to attain these goals was prepared by the Club-CILSS, together with a program of projects covering all of the related sectors (agriculture, food, health). As a result of these and other efforts by the Club-CILSS, yearly assistance to the Sahel countries from the 23 bilateral and multilateral donors rose to $1.7 billion by 1979. AID plays an active role in this international framework and U.S. assistance to the Sahel accounts for about 8% of the total in an average year.

Understanding The Struggle



Africare, helping to foster a better life for Africans—and for Americans a better appreciation of Africa's problems.

Following is an interview with C. Payne Lucas, director of Africare. Africare is a non-profit, voluntary organization concerned with providing needed human services to people who live in rural Africa. Its purpose is to improve the quality of life for rural Africans through programs of food production, water resource development, and health care.

Q. What is the origin of Africare?

A. Africare grew out of a health program in Niger started by an ex-Peace Corps volunteer physician, Dr. William Kirker. At the end of his tour, the Peace Corps decided to discontinue his contract since he was principally involved in clinical medicine and the Peace Corps focus was on preventative health. Kirker went to the government of Niger and asked for support for a voluntary organization to be called Africare. It was supposed to provide assistance to one region in Niger where Kirker had previously worked. The program recruited volunteers but soon ran out of money. The then President of Niger, Hamani Diori, a friend of mine from days when I was Peace Corps regional director in Africa, wrote to me and asked if I would

take over this responsibility and direct the effort backstopping Kirker's work in Niger. I was prepared to do this if Africare's program would be made Africa-wide with an emphasis on food production and with direction to galvanizing black Americans to give to Africa. The president thought this was a good idea. I resigned from the Peace Corps to reorganize Africare. That was in 1971.

Q. How large an organization is Africare now and what type of staff have you recruited?
A. Our total staff in both Africa and Washington is 65. Roughly 40 are in the field. We're the most democratic private voluntary organization in America. We are putting together an institution managed and directed by black people, yet our staff includes people of all races. We have white specialists, Cambodians, Jamaicans, Haitians, the former minister of health from Dominica and even two refugees from Afghanistan.

Over 80 years of experience are represented. All our people have been either in the Peace Corps or in AID. Nearly all speak at least two languages. Our staff is made of people who have worked abroad nearly all their lives.

Q. Where in Africa are you operating today?
A. Now we have offices in Mali, Niger, Senegal, Upper Volta, Zambia and Somalia. In addition, we have programs in Egypt, Sudan, Guinea, Rwanda, Zimbabwe, Mauritania, Gambia, Uganda and Ethiopia.

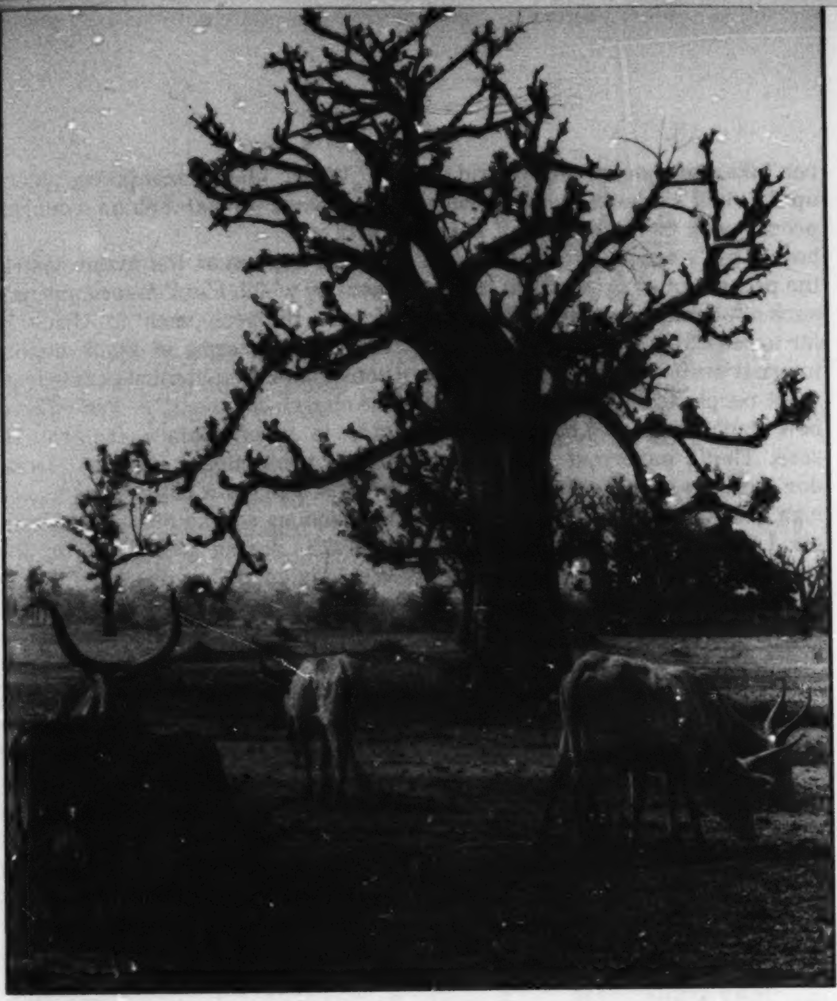
We have more of our work concentrated in the Sahel than in any other place in Africa. We began there. A larger percent of our staff—75%—is concentrated there. I guess roughly 75% of our resources are based in the Sahel. We are becoming more and more involved in southern Africa, particularly Zambia, Zaire, Zimbabwe and Somalia, naturally, because of the refugee problem. We are also trying to provide some hospital material assistance to Rwanda and the Sudan.

Q. Where do you see the greatest potential for development in Africa?
A. Southern Africa is the future of the continent. Zaire, Zimbabwe and Zambia form the food axis of Africa. If the United States and other Western nations could put the resources into that part of the world, then it would become an enormous breadbasket for the African continent, and feed Europe as well.

Africa is a food-deficit continent. It has no business being a food-deficit continent. Zambia, Zimbabwe and Zaire have all the needed natural resources to be a major food production area. If these nations would produce the food that they are capable of producing, the whole stability of the region would change overnight. If I were running AID, I would place a big part of my development resources here.

Q. What kind of investment is needed here?
A. It's creating the right kind of agricultural policies. It's human investment. It's providing the right kind of training for Africans in agriculture and extension work. It's the right kind of pricing policies for products produced by farmers. All of these come together to form a policy that makes sense.

Q. Can you identify and comment on some of your programs?
A. There are a number of villages in Upper Volta where we have initiated irrigation projects and the development of vegetable production. These projects were initially funded by the Lilly Endowment and private donors. In this area of Upper Volta, farmers never grew anything but millet before. Now they are successfully growing a food—vegetables—they haven't eaten before. They are raising enough for consumption and for export.



In Mali, where villages did not have rural dispensaries or safe water supply, we have helped provide the wherewithal to build wells. The villagers have done it themselves.

In Niger, we worked on the development of an irrigation program in the Irhazer Valley north of Agadez to resettle nomadic families. This valley has enormous ground water reserves. Some years ago the French went there looking for uranium. Instead of uranium, they found water. They just capped up the holes, covered the ground and left. Now we have the Tauregs and other nomads looking for these holes. We uncover the holes and put in deep wells to irrigate the land and provide water for the people, the cattle and for growing sorghum, millet and other crops.

It is interesting. People have said that you cannot deal with the nomads. But the adversity of the drought has demonstrated once again that people all over the world, regardless of their religion and race, seek for themselves the same things that all men seek: a decent living, decent health, recreation, education and a little stability in their lives.

In conjunction with Texas Tech University, we have designed a 700,000 acre ranch north of Goure, Niger. It will not only serve as a ranch, but there will be mixed agriculture, health facilities and educational and other social services. This ranch is designed to be large enough to accommodate the nomads and give them a chance, since it will have rotational and controlled grazing.

We also have a hospital in eastern Niger and have designed a comprehensive health care program for the entire Chad basin.

We are also involved in short-term projects that address immediate problems.

We do some things large and some things small. Now, in Upper Volta, all the programs that we have worked on in vegetable production, and water resource development started out with small grants from private foundations, individual donors and church organization communities. The program has grown into a large integrated rural development project funded by the Agency for International Development. We took the initial risk. This goes to show you what you can do with some money, a private volunteer agency and good support from the host country, a good AID mission, as was the case in Upper Volta, and good AID personnel back here. We put this program of integrated rural development together in Upper Volta in a rural region affecting 1,100 people. There are a lot of problems with this project. There are activities behind schedule, but some are doing better than we had ever anticipated. The simple truth of the matter is that here is a project that grew out of the villages and Africare and all the donor community working together. It is an example of what can be done when a group of people work together.

Q. What percentage of your efforts now go toward long range development and what percentage toward relief?

A. I would say 85% of our whole effort is toward long range development. At Africare, we're running on three tracks. We're running emergency relief, small village self-help kinds of programs and then we have the larger programs funded by the foundation community including such multimillion dollar, AID-financed projects as the one dealing with rice production in Zambia.

Q. To what extent do you interact with other PVOs in the field?

A. We had two meetings last month that looked at evaluating refugee programs. We also looked at the funding because we are concerned with how much money volunteer agencies raise and how much of it is getting overseas. Now Africare, the Peace Corps and AID are working on a number of interesting programs. We're doing a big fish culture project in Mali. We designed the program with the Peace Corps. We're using Peace Corps volunteers as fisheries experts and AID money and supervision as well as direction from Africare and the government of Mali.

We're doing the same thing in a big forestry program in Senegal. In the old days of the Peace Corps, that (cooperation) was unthinkable. The simple truth of the matter is in competition for scarce resources, the pressure for them is so great that you have to work with others who are skilled, who are prepared to live out in the bush and learn the languages. So you marry the Peace Corps, AID and PVOs such as Africare. Then you really begin to take advantage of all the resources.

Q. Have you had much difficulty trying to find the right kind of technical personnel for your project?

A. The crux of this business is qualified people. While resources are important and we need money to buy the equipment, the bottom line is that you need good people who are sensitive, who have technical skills and who can stay the course. And we're talking about staying the course in places like the Sahel, where the per capita income is less than $100 a year. It's tough and only the strong can survive in places like that. We're looking for technically qualified people—people who would be technically qualified not in Washington, DC, but in Mauritania. The key issue is that the technicians are on a different level of accomplishment in their areas. When they get into rural areas, they are completely out of their league. A lot of people are overtrained. When we look for sanitation engineers, we're not looking for someone to design the sanitation system in Washington, DC. We're talking about someone who can take water out of a river and set up the right kind of system. We need people with the right kind of know-how. That's tough. We are now in the process of thinking about having each applicant interviewed by a doctor to see if they have enough of that internal stuff to keep on going. We want people to talk to people about how much stress they can take overseas. That's important. People just don't realize how the success of foreign assistance is tied up with people. I think we need to create an Institute of Development, where development officers would be trained in the same way that foreign service officers are trained.

Q. Mr. Lucas, what about you personally? What's in this for you?

A. I guess it's the excitement and the frustration associated with this work when you go out to Africa and you see the enormous number of people in rural areas struggling against the sun, struggling against odds, struggling in some cases against political instability. They work with very little. Yet they show such great appreciation. You see the great smile, the great enthusiasm and hope when you provide a little help. That's why you're in this business. And when you see all these beautiful people, all that criticism about politicians collapses. You know when we put up a rural dispensary in Mali for $15,000 we revolutionized the whole health care system for that village. People out there are counting on our help and when you look at the enormous resources of that continent—it staggers the imagination. When I'm talking about resources, I'm not talking about mineral resources, which are vast, but about human resources. You put a book in an African kid's hand and give him some education and you'll turn out a nuclear scientist. The African continent is not being properly exploited. You look at the surface water in Zaire, there is enough hydroelectric power in Zaire to light up all of West Africa. The potential is there.

Q. What about mobilizing black Americans to get behind your effort?

A. We represent the major instrument by which black Americans participate in development in Africa. In the past, in terms of black institutions, black contributions came from the church communities. We've been able to involve black fraternities, black professional groups, social groups. The black church has been a tremendous source of money for us. In 1975, during the Sahel, in the Washington, DC metropolitan community alone, we raised a quarter of a million dollars. A lot of that money came from welfare mothers. People came from as far away as Southeast (DC) and brought money to us in shoe boxes. This is because people in the inner city and the ghetto can empathize more with the people in Somalia and the Sahel than with anyone else. They know what it's like to be without the basic things in life. The moral fiber on the continent and in the ghetto is so much stronger than you find in most other areas. Black Americans are beginning to understand that the struggle in Africa is a struggle to help people gain a decent life and safe water. Most Africans have never walked on a paved street or had safe water or have seen a physician. Our relationship to the continent is far greater than it was 20 or even 10 years ago.

Q. Does Africare provide scholarship or educational programs?

A. We don't have a scholarship program, but this year we are starting a program with the Washington area inner city high school and elementary school children. Students will be writing essays on Africa. The winning students will go to Africa for two to three weeks and they will meet with presidents, visit our Africare programs and staff. □

Conducting this interview for Agenda were Raisa Scriabine and Angela Wright, who is a press officer in AID's Office of Public Affairs.

WHAT THE MEDIA SAY...

All around the world, birthrates have gone down. Those nightmare scenarios of ever more non-stop billions of starving people packed like sardines will not come to pass. What's seen as bad news may not be. The "population explosion" was regarded as "bad news" because the fellow with the calculator said that if you split a pie among more people, each person has less. That's an argument that may never be settled. A famous demographer has noted that every baby comes equipped not only with a mouth but also with hands. People not only consume but also produce. That makes the pie grow. Isn't it odd that just about every nation in the world raised its standard of living while the "population explosion" was going on? What we see, then, is a pattern that is observable elsewhere in our society: We trumpet and politicize bad trends that may not be bad and may not be trends.

—Ben Wattenberg
in the
Washington Post

In his zeal to dispel the population explosion myth, Wattenberg fails to pause and ask himself what it was that brought about these fertility level declines. People indeed do have some control over their own destinies; but without knowledge of family planning, without access to contraceptives and the availability of contraceptives this control is severely limited. Birth rates have declined globally mainly because the national leadership in many of the most overpopulated countries began to comprehend the consequences of too many people and started to do something about it. The world population crisis has been described as a "silent explosion," and Wattenberg's misguided appraisal is a testimony to the subtleness of this explosion.

—Werner Fornos
in the
Washington Post

The United States spends millions of dollars each year promoting breast-feeding as the best way to feed infants. We support breast-feeding; what we cannot support is the code. The United States will continue to promote breast-feeding, but we cannot support a detailed and inflexible code, global in scope and rigid in structure, that our laws and our traditions would never permit us to implement at home. To begin changing our positions whenever they are unpopular in the United Nations is a policy with staggering implications, and one this Administration rejects completely.

—Assistant Secretary of
State Elliott Abrams
in the
Washington Post

The most important thing is that on a leading international public health issue health considerations have been set aside, and the American position has been worked out essentially on political and ideological grounds.

—Washington Post

Do more jobs and more food for poor Asians mean less for us? No, just the reverse: The extra income earned can and does create demand for new products from the industrial countries; the Third World now buys more American exports than Europe. Nor do bigger populations have to mean more poverty.

—Richard Critchfield
Christian Science Monitor

The decision by the State Department to suspend any further economic aid to Nicaragua is a bad sign. It means that country hasn't done enough in the past couple of months to slow the traffic in Cuban and Soviet weapons that have been entering El Salvador from Nicaragua.

It is difficult to know what the next step of the Reagan Administration might be. Some difficult decisions lie ahead; the United States cannot permit Central America to become a Communist bastion.

—Tucson Daily Citizen

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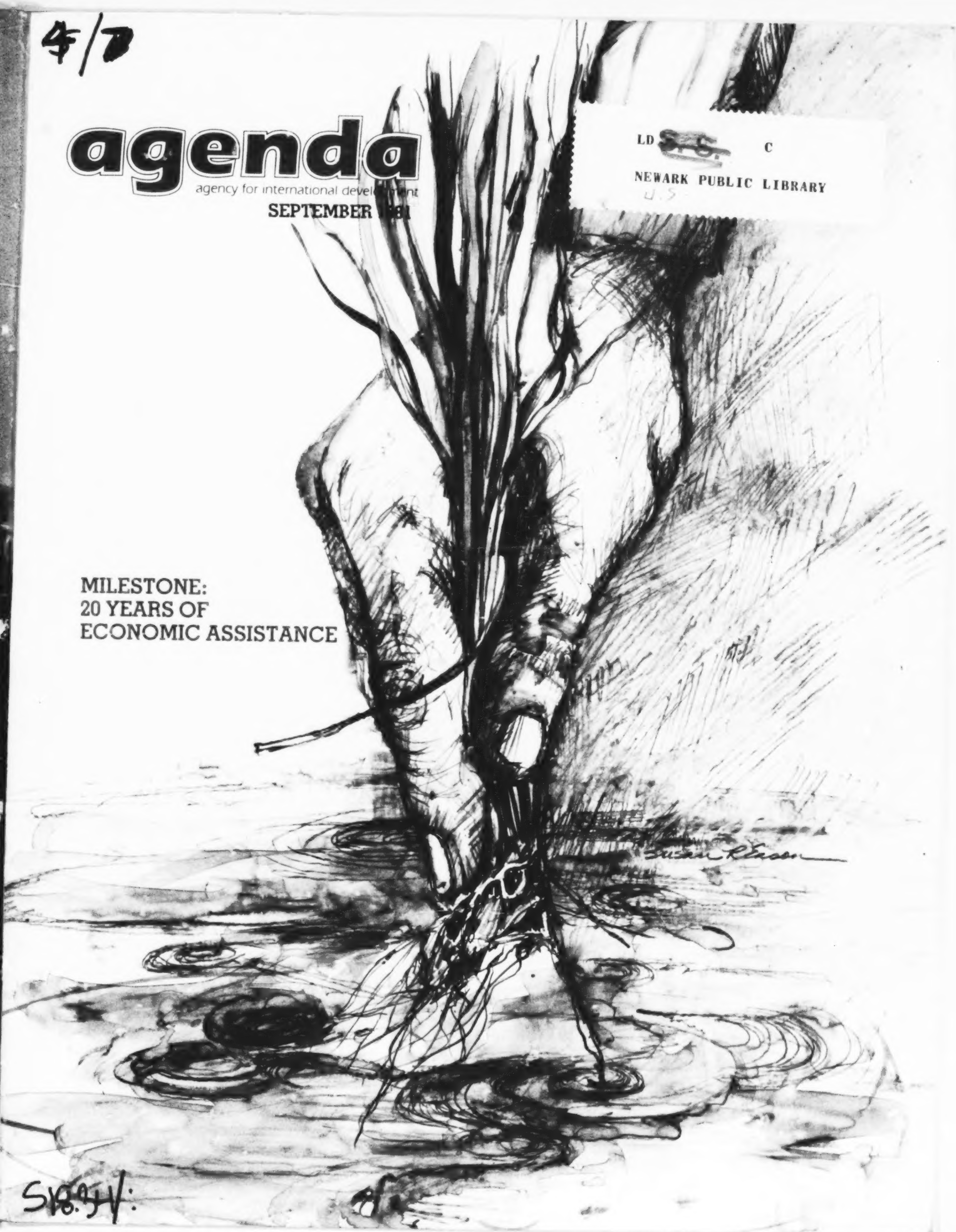

MILESTONE: 20 YEARS OF ECONOMIC ASSISTANCE

S18.3 V:

DEVELOPMENT UPDATE

More than 70% of Nairobi's population—over 400,000 people—live in slums and squatter communities, according to Calestous Juma, editor of the newsletter Ecoforum.

"The potentially destabilizing effects of excessive population growth in the years ahead must be taken seriously. Disorders abroad can affect our military and strategic situation, as well as our own unemployment, inflation rate, the prices and availability of critical industrial raw materials, and markets for our exports." From a statement by Ambassador Richard Elliot Benedick, coordinator of population affairs, before the Senate Foreign Relations Committee.

850 million people in developing countries lack basic education despite substantial increases in school enrollment, says a World Bank report.

The world's most widely used form of contraception is voluntary sterilization, according to a report by population specialists at Johns Hopkins University. The report estimated that either the female or the male is sterilized in 100 million couples in the world. There is disagreement, however. Jane Murray, director of the research arm of Planned Parenthood Federation of America, says her group would be "very surprised if that were true." Though sterilization is growing in popularity, she said, the pill is still the No. 1 contraceptive.

A breakthrough in contraceptive technology is years away, an international conference on family planning was told in a background paper. The report said researchers are working on more than 20 potential new contraceptive methods—especially new kinds of intra-uterine devices, under-the-skin contraceptives, better, longer-lasting injections, and contraceptives for men. Trouble is, the conference was told, none of these is likely to be available in less than 10 years.

Getting the message across in a flash . . . Gordon! First used in Latin America as popular commercial publications with romantic themes, photonovels and comic books are now being produced by development workers to communicate machinery maintenance, health, family planning and other messages around the world. AID's Resources Report recently interviewed Bonnie Cain, co-author of two books that examine those media. Says Cain when discussing the design of a photonovel: key ingredients for success are an interesting plot, the right message, common-sense casting of characters and audience participation in developing the story. The two books are: "Fotonovelas and Comic Books: The Use of Popular Graphic Media in Development" and "The Participatory Process: Producing Photo Literature." The first discusses distribution, design, production and implementation. The second book offers step-by-step directions for design and layout of photonovels and includes guidelines for audience participation. For more information, contact AID's Office of Education, Development Support Bureau, Room 311 Rosslyn Plaza, Washington, DC 20523.

Correction: The per capita GNP for Costa Rica is $1,500. The total 1979 population for Latin America is 353 million.

agenda

Cover: The development of high-yield varieties of wheat and rice are just some of the accomplishments of the AID since its start in 1961. Twenty years ago this month, Congress passed the Foreign Assistance Act of 1961, which paved the way, two months later, for AID. To mark this important milestone, Agenda has gathered some photographs to show the evolution of the foreign assistance efforts over the past two decades. See page 12.

Photo Credits: Mike Evans, The White House, pp. 2-3; University of Hawaii, NIFTAL, pp. 4-8; pp Carl Purcell, pp. 12-14; Key Chernush, pp. 21-24; AID, all others.

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Secretary of State Haig and President Reagan confer at the Summit.

OTTAWA: THE SUMMIT

World leaders address Third World issues

Top leaders from Italy, Japan, Germany, the United States, Canada and Great Britain, at dinner.

President Reagan attended the two-day Ottawa (Canada) summit conference in July with six other heads of state from leading industrialized nations. At its close, the leaders, from Canada, France, Italy, Japan, West Germany, United Kingdom and the United States issued a joint communique, a major portion of which deals with relations with developing countries:

We support the stability, independence and genuine non-alignment of developing countries and reaffirm our commitment to cooperate with them in a spirit of mutual interest, respect and benefit, recognizing the reality of our interdependence.

It is in our interest as well as in theirs that the developing countries should grow and flourish and play a full part in the international economic system commensurate with their capabilities and responsibili-

ties and become more closely integrated in it.

We look forward to constructive and substantive discussions with them, and believe the Cancun (Mexico) summit offers an early opportunity to address our common problems anew.

We affirm our willingness to explore all avenues of consultation and cooperation with developing countries in whatever forums may be appropriate. We are ready to participate in preparations for a mutually acceptable process of global negotiations in circumstances offering the prospect of meaningful progress.

While growth has been strong in most middle-income developing countries, we are deeply conscious of the serious economic problems in many developing countries, and the grim poverty faced especially by the poorer among them. We remain ready to support the developing countries in the efforts they make to promote their economic and social development within the framework of their own social values and traditions. These efforts are vital to their success.

We are committed to maintaining substantial and, in many cases, growing levels of Official Development Assistance and will seek to increase public understanding of its importance. We will direct the major portion of our aid to poorer countries, and will participate actively in the United Nations Conference on the Least Developed Countries.

We point out that the strengthening of our own economies, increasing access to our markets, and removing impediments to capital flows contribute larger amounts of needed resources and technology and thereby complement official aid. The flow of private capital will be further encouraged insofar as the developing countries themselves provide assistances for the protection and security of investments.

The Soviet Union and its partners, whose contributions are meager, should make more development assistance available, and take a greater share of exports of developing countries, while respecting their independence and non-alignment.

We will maintain a strong commitment to the international financial institutions and work to ensure that they have, and use effectively, the financial resources of their important responsibilities.

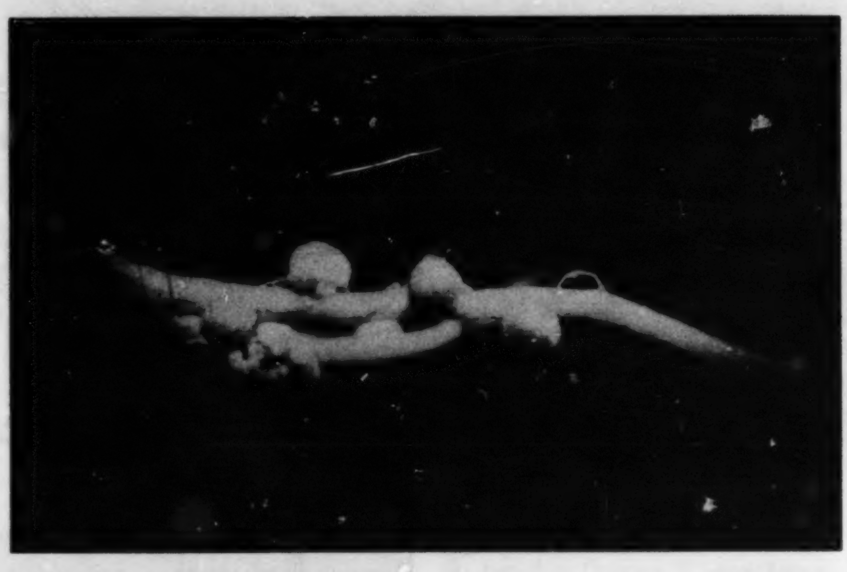
We attach high priority to the resolution of the problems created for the non-oil developing countries by the damaging effects on them of the high cost of energy imports following the two oil price shocks. We call on the surplus oil-exporting countries to broaden their valuable efforts to finance development in non-oil developing countries, especially in the field of energy. We stand ready to cooperate with them for this purpose and to explore with them, in a spirit of partnership, possible mechanisms, such as those being examined in the World Bank, which would take due account of the importance of their financial contributions.

We recognize the importance of accelerated food production in the developing world and of greater world food security, and the need for developing countries to pursue sound agricultural and food policies; we will examine ways to make increased resources available for these purposes.

We are deeply concerned about the implications of world population growth. Many developing countries are taking action to deal with that problem, in ways sensitive to human values and dignity; and to develop human resources, including technical and managerial capabilities. We recognize the importance of these issues and will place greater emphasis on international efforts in these areas. □

THE MYSTERIOUS BLACK BOX

by Susan C. Harris



Silhouetted nodules on legume roots. Such nodules house the Nitrogen-fixing bacteria.

An international team of agronomists and microbiologists check for nodulation.

Which would you choose: nitrogen fertilizer for your legume crops or a small bag of peat containing millions of microscopic bacteria? Since everyone knows that all plants need nitrogen to grow, most people would choose the fertilizer. That choice could cost over $35 for every hectare (2.5 acres) planted.

Nitrogen is an expensive fertilizer, in terms of purchase price and the fossil energy needed to manufacture it. Farmers in the developing world alone spend over $5 billion a year for commercial nitrogen fertilizer. The manufacturing process used to produce this fertilizer requires temperatures of several hundred degrees Celsius, several hundred atmospheres of pressure, plus a hydrogen source. All this adds up to a lot of oil or natural gas.

Additionally, the need for fertiliz-

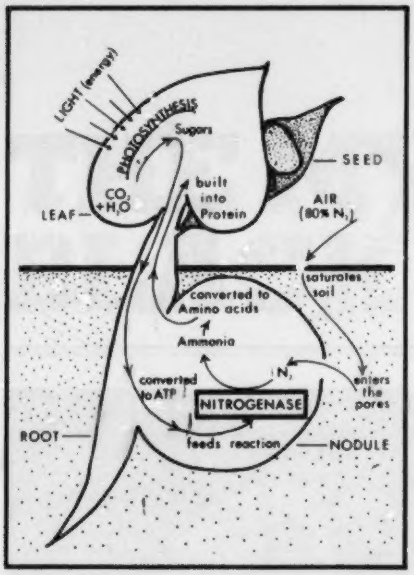
Little is really known about nitrogen fixation—it works and can improve Third World crops.

er nitrogen continues to increase dramatically. The United Nations Development Program estimates that the use of nitrogen fertilizer needs to increase to 135 million metric tons by 2000 A.D. A country with India's current population growth rate would have to build—every year—two and one-half ammonia production plants, each with a 1,000 ton a day capacity. The prospect of this increased need, coupled with growing protein shortages, is of such worldwide concern that many governments have come to support an international research effort to increase protein production through maximizing biological nitrogen fixation.

Most tropical soils are deficient in nitrogen in the form used by plants to synthesize amino acids and build plant proteins, and no "higher plant" is able to use atmospheric nitrogen on its own. However, some microorganisms, the nitrogen fixers, have the capacity to convert nitrogen gas from the soil atmosphere around us to usable nitrogen compounds. Since the atmosphere is 80% nitrogen, this provides a virtually inexhaustible supply of nitrogen. A few crop plants—beans or peas, for example, can be supplied with their nitrogen through beneficial association (or symbiosis) in the root nodules with nitrogen-fixing microorganisms. This process is called "biological nitrogen fixation" or BNF.

The degree of interdependence between crop plants and nitrogen fixers varies. In *associative fixation* the link is indirect: certain plants and bacteria find advantages if both ex-

Sudanese student Sayeda Ahmed Abu Nayib studies low-cost, low-technology methods of inoculation at a training course in Kenya.



ist in the same rhizosphere (the soil surrounding the roots of the plant). In *symbiotic fixation* the link is intimate: the plant provides energy and physical protection to the bacteria, and the bacteria in turn catalyze a biochemical reaction that makes atmospheric nitrogen available for plant growth. At present, symbiotic systems are more important in agriculture than are associative systems.

The unique legume family

Legumes, which include beans, peas, peanuts, alfalfa, the clovers and many others, are the crops best able to benefit from symbiotic BNF. A number of legume species can obtain all of their nitrogen from the air, with the help of their symbiotic partners—the *Rhizobium* bacterial.

Legumes are unique in other characteristics as well. Presumably because nitrogen is always available to them, legumes are not only high in calories, they are also rich in quality protein. Grain legumes currently provide up to 20% of the world's dietary protein.

Non-food legume crops give wood products or charcoal for fuel; are used as ground cover for weed control or soil conservation; and are involved in energy programs based on biomass consumption. Plowing legumes under provides nitrogen rich organic matter to poor soils, improving structure and fertility. Finally, in mixed or sequential cropping systems, important non-legumes such as

---

AID BUILDS NETWORK FOR BNF RESEARCH

Wanted: promiscuous legumes and cultured rhizobia.

What sounds like a racy recruitment drive by AID's Agriculture office is in fact part of a program to increase agricultural productivity in developing countries. By tapping the nitrogen captured from the atmosphere through the interaction of certain bacteria (rhizobia) and plants (legumes), farmers could reduce their dependence on scarce and expensive petroleum-derived nitrogen fertilizer.

Promiscuous legumes are not particular in their choice of rhizobia—they'll nodulate with just about any strain of nitrogen-fixing bacteria that's willing and able. Their freewheeling habits make promiscuous legumes attractive to researchers in nitrogen fixation, but only a few of these widely promiscuous legumes are known. In their work on improving legume varieties, scientists also select plants that form more faithful relationships with bacteria, but have other redeeming virtues—such as disease or pest resistance.

Nitrogen is the most commonly deficient nutrient in soil. Protein is a major diet deficiency for millions of people in developing countries. Legumes and rhizobia could be an important way of helping meet both needs.

"... fuller utilization of natural processes in the biological fixation of nitrogen has lagged behind because of an era of inexpensive synthetic nitrogen fertilizers," noted an AID report in 1975. "This era now appears to be approaching a close in favor of cultural systems for lesser developed countries that will use plants both to fix nitrogen and to yield a greater proportion of the diet in the form of legumes."

The committee that produced the report then laid out a strategy by which AID could help develop practical methods and work with developing countries so that small farmers could benefit from BNF systems. The program aims at tropical and subtropical countries, where food needs are the greatest.

Lloyd Frederick, a soil microbiologist in AID's Agriculture office, chaired the committee. Six years later, he reports that its recommendations are proceeding on schedule. "The rudiments of research and information on reliable techniques for nitrogen fixation are now becoming available," he says. "We're moving out to test the techniques with scientists, technicians and farmers in the developing countries."

Among the on-going activities: projects to develop BNF technology with 20 U.S. institutions; cooperative studies with Morocco, Senegal, El Salvador, Guyana, Egypt, Chile, Thailand, Nigeria and Brazil; coordination with four international agricultural research centers; and technical assistance on inoculating plants with rhizobia to scientists in Thailand, Sri Lanka, Guyana and Spain.

The network of projects at U.S.

the cereals can profit from their association with the nitrogen-fixing legume/*Rhizobium* symbiosis.

The mysterious "black box"

The biological processes involved in the symbiotic association between legumes and the *Rhizobium* bacteria that infect their roots are still not entirely understood. Rhizobia in the soil or on the seed at the time of germination colonize the roots of the seedlings. After the rhizobia penetrate the roots, tumor-like nodules form to house the bacteria and provide them with a share of the energy derived from the plant photosynthesis. The bacteria produce nitrogenase, the enzyme responsible for the biochemical conversion of N_2 (nitrogen from the soil atmosphere) to NH_3 (the ammonia compound usable by the plant). The ammonia is then converted to amino acids, which are built into protein for plant growth and seed production.

Because some aspects of the nitrogenase enzyme reaction remain a mystery, it is tempting to summarize the overall reaction as a "black box" with only the "inputs" and "outputs" fully understood. Fortunately, even this imperfect understanding allows us to reap the benefits of BNF. It is necessary to understand that legumes can supply their own nitrogen only when the correct *Rhizobium* bacteria are present, and that strains of rhizobia that occur naturally in many soils may not be the specific bacteria the plant needs for the most efficient symbiosis.

"Choosing the horses for the courses"

It is difficult to find plants well-adapted to, or bred to, perform under tropical constraints. In the case of the legume, not one but three factors must be considered: the plant, the rhizobia, and the symbiosis between the two. Those rhizobia that cause nodules to form on one plant may not effectively do so on another. Other strains or types of rhizobia can cause worthless nodules to form (native strains often do this). Rhizobial strains also compete against each other, and the most aggressive strains are not always the best

universities, many of which include cooperative research overseas with scientists in tropical countries is developing effective rhizobia strains, improving inoculation methods and studying biological nitrogen fixation in legumes. "Because the Agency needs knowledge and technology of immediate help to the small farmer in developing countries," Frederick points out, "the projects all relate to practical applications."

Biological fixation "won't take the place of all nitrogen or other fertilizers," cautions Frederick, who monitors the BNF projects. "But it's an alternative that complements commercial nitrogen fertilizers in a good crop system."

The Agency's program is "modest," Frederick explains—about $1.8 million a year. But the benefits far outweigh that investment, especially in terms of improving nutrition and increasing agricultural self-sufficiency.

AID-funded research projects emphasize well-known legumes, Frederick adds. But they don't exclude other plants. At the University of Florida, and AID-funded project is examining whether bacteria will form useful nitrogen-fixing relationships with plants other than legumes.

The Agriculture Department's research center at Beltsville, MD, with partial funding from AID, is working on a comprehensive germ plasm bank of rhizobia for all tropical and temperate legumes as well as other nitrogen-fixing microorganisms.

The success of BNF depends on several factors, like effective bacteria strains, good inoculation technology and sensible agricultural practices.

Educating farmers about proper watering and fertilizer use is important. Nitrogen is essential for plants, but it's possible to have too much of a good thing. Rhizobia become lazy if farmers add commercial nitrogen fertilizers to plants that already have active nodules.

"The real challenge," according to Frederick, "is to make this system reliable—that's even more important for farmers than dramatic increases in yield. In countries where there's no adequate way to store food reserves, it's crucial to have consistent crop yields."

That's why it's so important to test these techniques in countries where they are most needed, then incorporate the practices best adapted to the specific country into local farming. "Training is the key," Frederick continues, "and we've already made headway helping create a pool of qualified scientists in the tropics."

The program at the University of Hawaii has trained 67 people (eight of them are women) in six-week intensive courses on practical aspects of legume/*Rhizobium* nitrogen-fixing systems. Intern programs at Hawaii and Beltsville provide on-the-job experience for scientists from developing countries in techniques of tropical legume bacteriology, and regional training courses are co-sponsored by NifTAL and the Microbiological Resources Centers in Kenya and Brazil.

"Once scientists in developing countries are convinced of the value of these techniques," Frederick believes, "they'll develop projects on their own to incorporate into country agricultural programs."

"As a farmer and a scientist, I'm excited about the possible applications," Frederick comments enthusiastically. "We're at the stage where we have some tools for AID missions to try." □

strains at fixing nitrogen. Where the plant is not given nitrogen fertilizer or is not well-nodulated by effective bacteria, it will not produce good yields, even if growth conditions are otherwise favorable.

Rhizobia are improved by collecting naturally occurring bacteria, selecting them for high effectiveness, multiplying and supplying them to future legume crops by inoculation at planting time.

The testing to determine which strains are the most effective for a given crop is a long and important process. In the first step, the isolated strains are given a "quickie" test in growth tubes to see if they are compatible with the host plant. In the second step the good strains are tested on plants raised in a sand and nutrient solution in glass jars—a test that reduces the opportunity for bacteriological contamination and gives the rhizobia their best chance to perform. The strains that do best in the glass jars are then taken to a third step—pot tests. Although the environment is still controlled, the soil mixture in the pot tests is more like the soil of farmers' fields than the growth medium used in previous steps. Many times the strains that were most effective in the glass jars do not perform well under soil conditions that favor the plant over the bacteria. Fewer than 10% of the strains are still considered worthwhile for further testing at this stage.

The last step is the most realistic and the most difficult stage of the strain testing procedure. In field trials the environment cannot be controlled and the bacteria as well as the plants are subjected to many stresses not encountered in the lab or the greenhouse. Still, the legume/*Rhizobium* symbiosis will eventually have to work in the fields and very probably under more stresses than it will endure in experimental plots. For this reason, only those *Rhizobium* strains that have been subjected to the whole four-step procedure and have "passed" are "recommended" by the national and international institutions involved in this sort of applied BNF research.

NifTAL microbiologist Jake Halliday examines inoculated chickpea roots.

A network of trials

Until recently field testing of strains was limited. Recommendations to agricultural planners and growers included only those strains and crops that could be trusted—that had been locally tested under the conditions prevalent at the experimental site. However, in 1979, scientists and administrators from major agricultural research institutions throughout the tropics agreed that the need for standardized inoculation trials carried out under realistic field conditions and employing the best strains available was imperative. Thus, the University of Hawaii NifTAL (Nitrogen Fixation in Tropical Agricultural Legumes) Project, a *Rhizobium* research and technical assistance project under an AID contract, was charged with promoting the effort to set up an International Network of Legume Inoculation Trials. Scientists at almost every tropical institution involved in BNF or grain legume research were asked to be part of the network.

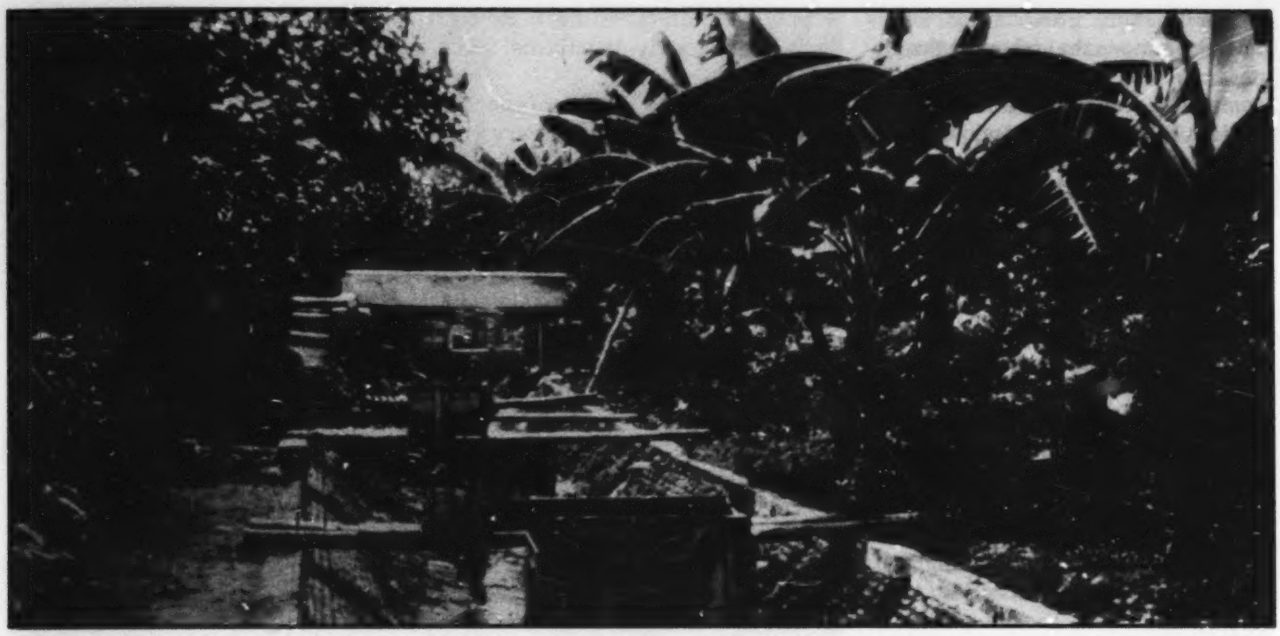
The network experiments include a series of inoculation trials, beginning with a test of the plants' response to inoculation, and progressing to standardized testing of locally recommended strains for locally favored crops. NifTAL assumes an active role to ensure that each cooperating scientist has the materials he needs to conduct the trials. This includes technical assistance and the training in inoculant production and conducting the field trials. Tests are carried out at institutions throughout the tropics. The result will be obtained from a broad experimental base, and recommendations will reflect that fact.

The research/development symbiosis

Making the most out of the high-protein, low-input legume/*Rhizobium* symbiosis depends on a careful program for putting it to use. Once agricultural and development planners include legume crops for local farming systems, they recognize the high cost of using nitrogen fertilizer for those legume crops. Other planning priorities are affected. The availability of good quality legume crop seeds is essential. Fertilizers other than nitrogen must also be considered. The need for systems for supply inoculants, either through imports or local manufacture, becomes pressing. Cropping systems that use some of the fixed nitrogen of the legumes for non-legume crops become an attractive alternative. Finally, marketing systems that ensure delivery of the valuable products to the consumer must be put in place.

Teamwork is essential in setting up a utilization program. Just as the plant and the bacteria must work together to use available atmospheric nitrogen, the scientist and the development planner must work together to use available knowledge. ☐

Susan C. Harris is an information specialist with the NifTAL project at the University of Hawaii.



The task at hand: The same ditch over which latrines are suspended supplies water for laundry, bathing and drinking.

W.A.S.H.

Water and Sanitation for Health—a project without red tape.

by Maxine Stough

If AID mission directors could make a wish, odds are they would opt for a tool bag of every conceivable technical service, but without the red tape of most AID projects. In a sense, where water supply and sanitation are concerned, the wish already has been granted.

Water and Sanitation for Health (WASH), an AID project now completing its first year, provides four basic tools: technical assistance, information support, technology transfer, and manpower development and training. Each tool, or a combination, is available to AID missions for the asking, under a unique, effective contracting mechanism.

The project takes on particular significance in light of the International Drinking Water Supply and Sanitation Decade, whose goal is to achieve "clean water and adequate sanitation for all by the year 1990." Water-related diseases are estimated to claim up to 25 million lives a year and illnesses caused by unsafe drinking water and poor sanitation take a heavy toll on human productivity in less developed countries.

To date, the $10 million, four-year project has served over 30 AID missions. Focusing on rural and urban fringe areas of less developed countries, WASH works with AID's regional bureaus through the mission at all levels of government in the host country to achieve its goal of plugging technical assistance into the field with minimum delay and maximum professionalism.

Most requests have been for short-term technical expertise. For example, last December when the AID mission in Mauritania needed help in putting together a project paper for rural land reclamation, it got quick results when it called upon WASH for help. Exactly one day after WASH project officers received the request, an order of technical assistance direction was issued to the WASH prime contractor, Camp, Dresser, and McKee (CDM), a Boston-based environmental engineering and consulting firm.

In 17 working days CDM dispatched an environmental engineer and a scientist specializing in schistosomiasis, a serious and widespread water-borne disease, to study the dams used in agriculture, which also were breeding grounds for snails and mosquitoes that transmit the disease. Within weeks, the study was completed and a host of recommendations issued to the mission.

Just several weeks ago, authorization came through for the Mauritania mission to proceed with rural land reclamation to improve the construction of 10 dams. The events could not have occurred in such rapid-fire fashion had it not been for WASH. Funding and administrative bottlenecks have been known to cause from 30-600 day delays in providing requested technical assistance to the field.

WASH strikes to the heart of those delays, which jumps the time-consuming hurdles of contracting and procurement for AID missions by sorting out and negotiating beforehand most of the technical services that the project provides.

> **WASH is the hinge-pin of U.S. technical assistance for the Water Decade.**

The project is the brainchild of Victor Wehman of AID's Office of Health, Water Supply and Sanitation Division. According to Wehman, WASH is the "hinge-pin of technical assistance for U.S. involvement in the International Drinking Water Supply and Sanitation Decade" (1981-90).

Application for WASH technical assistance is made from field missions or Washington offices through the regional bureaus. They are then transferred to the Office of Health, where a decision is made as to whether and how assistance will be granted.

"In addition to the obvious benefit of speed, WASH partially fills AID's direct-hire manpower technical assistance void," Wehman said. According to Wehman, the ranks of AID's technical personnel in water supply and sanitation have thinned by approximately two-thirds since 1975.

Approximately 70 professional and technical interdisciplinary specialties in water supply and sanitation are represented in the WASH project. They range from epidemiologists to sanitary engineers to hydrogeologists, to technology transfer specialists, to training specialists, to anthropologists and development economists. "Because we are dealing here with a human problem and human problems are multifaceted, WASH takes a multidisciplinary approach," Wehman explains.

When a request for assistance arrives, WASH determines what material and equipment are needed and available from the private sector to meet the mission's problem. These are subsequently analyzed in light of their suitability to host country conditions.

WASH may contact the AID mission to pinpoint the mission's needs. If, for example, the mission request is for assistance in rural water supply technology, a technical team might be assembled to travel to the country to investigate options for obtaining locally manufactured materials and to assess the country's manufacturing capabilities.

"The pumps that are manufactured overseas may not be as expensive or as pretty as the U.S. or European models, but they work well," he said. "And not only do they do the job less expensively, but spare parts will be readily available in the country. Using locally made pumps also means helping keep people in jobs."

Hand pumps modeled after the extensively field tested AID hand pump already are being manufactured under WASH technical supervision in Indonesia, Ecuador, Tunisia and the Dominican Republic. Manufacture is expected to begin soon in the Philippines. A five-year summary report describing the AID hand pump technology transfer program can be obtained by writing WASH.

The AID hand pump program is an example of operational research and development and technology transfer conducted through the project. Georgia Tech, under subcontract to the WASH contractor, redesigns the AID hand pump to suit prevailing field conditions.

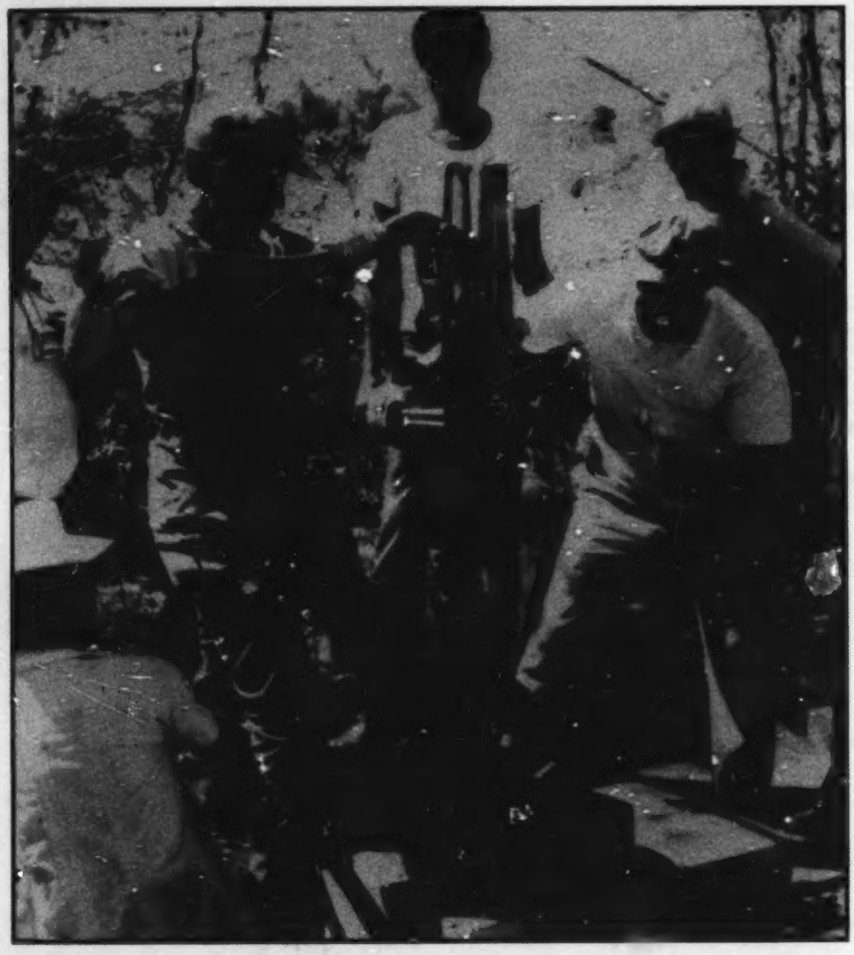
Another research and development project is a deep-well hand pump for use where ground water runs far beneath the surface (150-400 feet). "The technology already exists for deep-well drilling; it is just not widely affordable for less developed countries," Wehman said. WASH is attempting to find ways to manufacture low-cost, low-maintenance water well drilling rigs in host countries at a fraction of their cost in the states.

As a result of a 1980 WASH study Ecuador is considering manufacturing plastic well-screens; low-cost, self-closing faucets (Robovalves), and riser-type, ceramic, water-seal latrines. Ecuador currently imports its water-seal latrines from a combination firm that cannot keep up with demand in either country.

Once technology assessments have been completed, WASH may recommend a local manufacturing pilot project to determine, in addition to local manufacturing capabilities and required natural resources, the adaptability, acceptability, and marketability in Ecuador of certain kinds of water and sanitation systems or devices.

Field tests are a must, Wehman says. "How else would we know that a hand pump might have to be strong enough in certain places to withstand a water buffalo scratching himself against it?"

"If we do our job properly with technology transfer, water supply



One of the emphases of the WASH project is technology transfer to encourage host country manufacture of water hardware such as this WASH handpump.

and sanitation systems will continue to work," Wehman said. Continued functioning also hinges on effectively integrating the training to help the users understand, operate and maintain the systems.

Because water supply and sanitation facilities are only as good as the care that they receive, it is logical that WASH emphasizes manpower development and training. By using competency-based training, "trainers of trainers," as WASH calls them, a chain of events is set in motion that results in competent field operational personnel able to handle the tasks to keep the systems going. The local or regional technicians are not only prepared to maintain the systems, but they also are schooled in the techniques of passing their knowledge to others.

Whether it is used in training lay engineers, assembly line workers, or local community water technicians, competency-based training is a hands-on method in which the trainee graduates from one task to another, only after demonstrating competency.

Another critical part of the project is the Coordination and Information Center in Arlington, VA. The center, with access to major information banks on rural and urban fringe water supply and sanitation programs worldwide, manages WASH activities and gathers, analyzes, synthesizes and disseminates information as requests come in.

During the center's first 12 months of activity, it has processed over 300 information requests; the volume is expected to go up.

Other principal collaborators in WASH are Boston University, International Science and Technology Institute (ISTI), Research Triangle Institute (RTI), University of South Carolina, and Georgia Institute of Technology.

Boston University's Center for Educational Development in Health specializes in competency-based training for health workers in developing countries. ISTI provides technical and managerial guidance in the adaptation, transfer, local manufacture and maintenance of water supply and sanitation technologies.

WASH relies on RTI for guidance in social sciences, public health, economics, survey research, data management and statistical analysis. The University of North Carolina's Department of Environmental Science and Engineering is supplying support in sanitary engineering, public and environmental health, economics, training and social science. The Georgia Institute of Technology and its subcontractors provide operational, hands-on technology transfer, expertise in local manufacturing of devices, field testing pilots, training and research and development. ☐

WASH services also are available to private voluntary organizations within host countries that are working with AID missions.

WASH is preparing a summary report of its work. To obtain a copy write or call for the information (703-243-8200).

Requests solely for information in water supply and sanitation need not be channeled through missions. The request may be made by cabling directly to WASHAID or by Telexing to WUI 64552. Written requests should be mailed to the WASH Project Coordination and Information Center, Room 1002, 1611 N. Kent St., Arlington, VA. 22209.

MILESTONE

20 years ago this month Congress passed the Foreign Assistance Act and then there was AID.

The photos on the following pages trace what AID Administrator M. Peter McPherson has called "our proud tradition of helping others help themselves."

A young woman harvests miracle rice in the Philippines.

Inside the longest tunnel in Asia—connecting plants of the AID-funded Kundah hydroelectric project in India.

On Sept. 1, 20 years ago, Congress enacted Public Law 87-195, the Foreign Assistance Act of 1961. That legislation, which paved the way two months later for creation of the Agency for International Development, was meant to better coordinate assistance efforts then in place. U.S. foreign assistance programs date back to 1947 and the Marshall Plan. Subsequent milestones include President Truman's Point IV program of 1949, the Development Loan Program of 1950, the Mutual Security Agency of 1951, the Food For Peace Program of 1954. The Peace Corps

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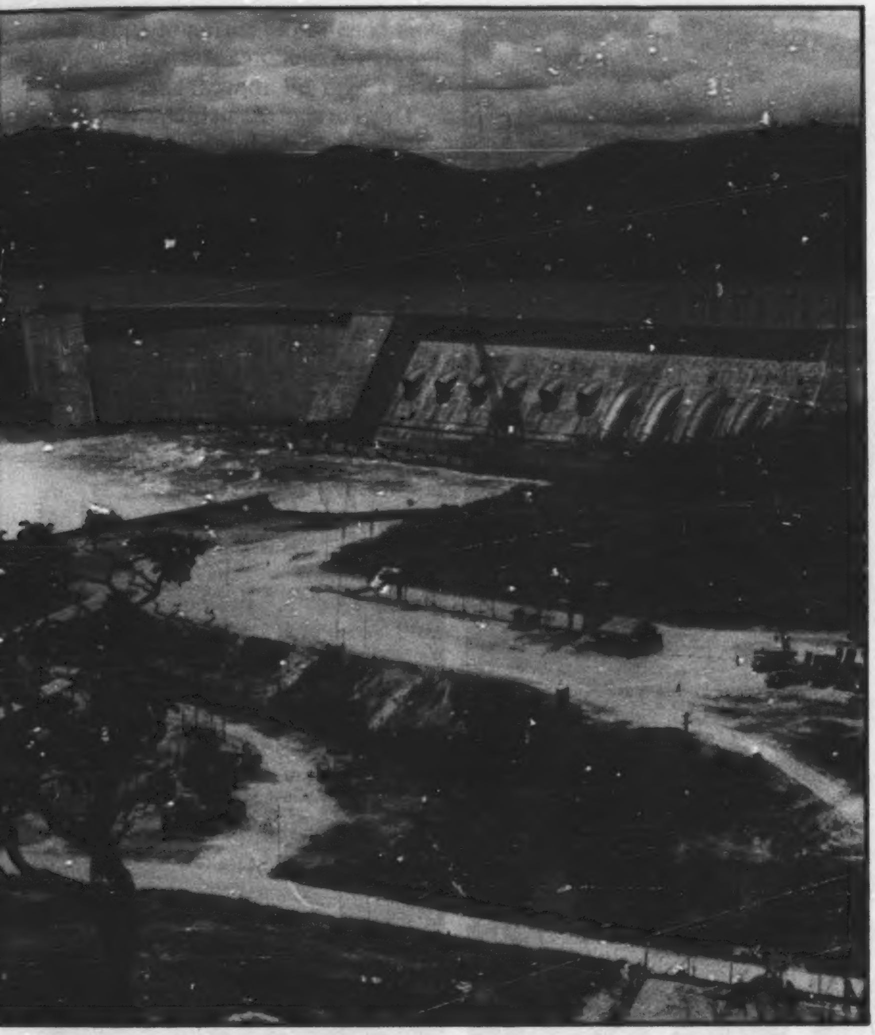
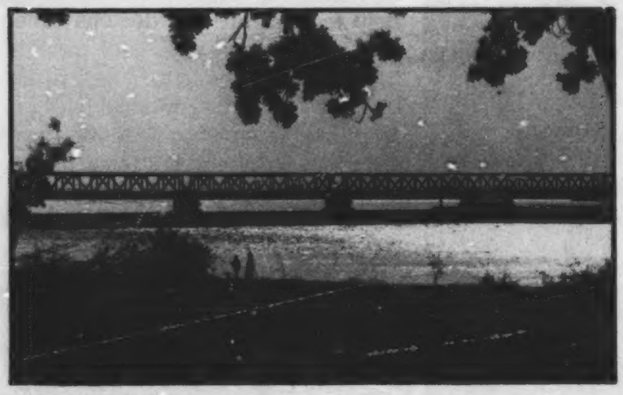


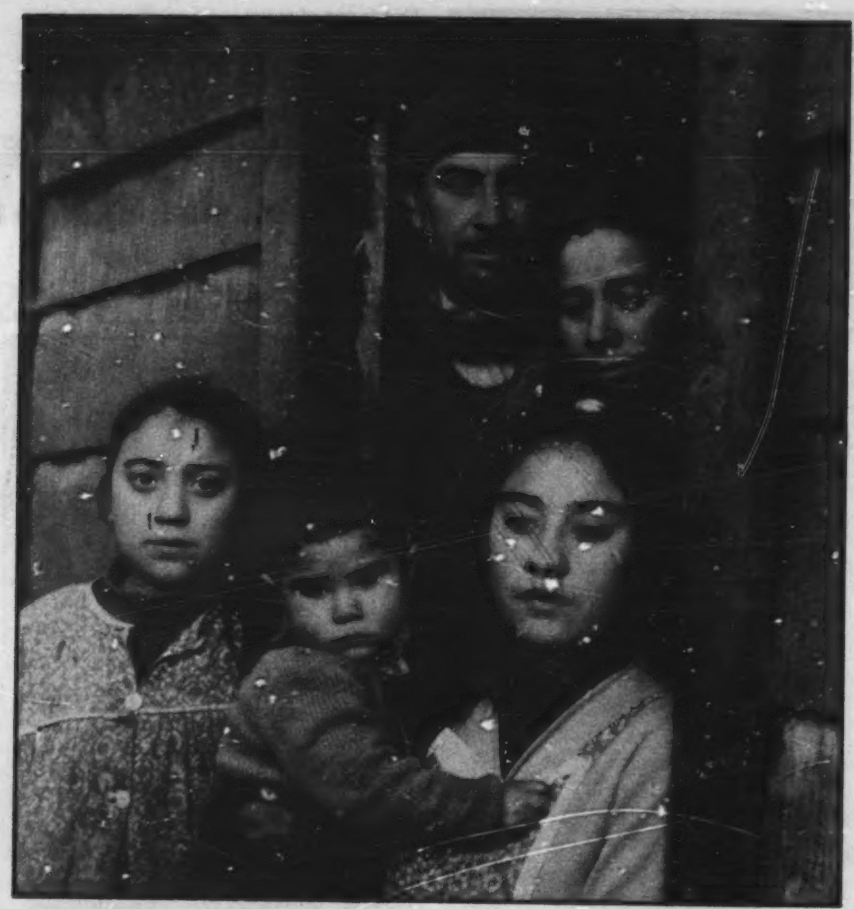
This is one of many large-scale projects common in the early days of AID.

AID's efforts to improve housing were stepped up with the shift toward basic needs.



The bridge at Markala, in the Sahel.

Health, a basic human need, became one of the main focuses of later years.



was born in the spring of 1961. The Foreign Assistance Act was an umbrella over all approaches.

The Foreign Assistance Act was "To promote the foreign policy, security and general welfare of the United States by assisting peoples of the world in their efforts toward economic development and internal security . . ."

Congress, in its "Statement of Policy," said:

"It is the sense of the Congress that peace depends on wider recognition of the dignity and interdependence of men, and survival of free institutions in the United States can best be assured in a worldwide atmosphere of freedom.

"To this end, the United States has in the past provided assistance to help strengthen the forces of freedom by aiding peoples of less developed friendly countries of the world to develop their resources and improve their living standards, to realize their aspirations for justice, education, dignity and respect as individual human beings, and to establish responsible governments.

"The Congress declares it to be a primary necessity, opportunity and responsibility of the United States, and consistent with its traditions and ideals, to renew the spirit which lay behind these past efforts, and to help make a historic demonstration that economic growth and political democracy go hand in hand to the end that an enlarged community of free, stable and self-reliant countries can reduce world tensions and insecurity.

"It is the policy of the United States to strengthen friendly countries by encouraging the development of free economic institutions and productive capabilities, and by minimizing or eliminating barriers to the flow of private investment capital."

Since 1961, the U.S. foreign assistance effort has evolved from one that emphasized large-scale projects—bridges and dams, for example—to one targeting "basic human needs." □

HEIRS OF CONFUCIUS

Villagers in developing countries throughout Asia still follow tenets of this ancient teacher.

Text and photographs by
Richard Critchfield

Author Richard Critchfield, also shown above, with village children in China.

To stand in Beijing's gigantic People's Square is to feel dwarfed in the most totalitarian society conceivable. This concrete plain, from T'ien-an-men Gate and the yellow-roofed Forbidden City to the enormous, ugly Stalino-Fascist architecture on all sides, is so big it's as if D. W. Griffith staged "1984" with one of those Babylon-type sets that reduce human beings to the size of ants.

Early one morning last summer, as I walked beneath enormous red characters proclaiming, "Chairman Mao's Thoughts Forever!," the square was empty except for some early risers filing in and out of Mao's tomb.

Within months Mao Tse-tung's pictures were taken down and his "Thoughts" removed from many bookshelves, symbolizing, I think, the end of East Asia's post-war Marxist-Leninist age. The stage now seems set for a much more rapid and as yet unpredictable working out of the world's post-1800 technological revolution. If Deng Xiaoping's "four modernizations" policy succeeds in transforming China over the next several decades, an economic powerhouse will seriously challenge Western world domination. Its cultural underpinning will be Confucianism.

In February 1980, British sinologist Roderick MacFarquhar, writing in *The Economist* began an essay entitled "The post-Confucian challenge" with this paragraph:

In Tokyo last autumn, a Chinese vice-premier reportedly told his Japanese hosts: "Add your 100 million to our 900 million and we have wonderful force that none can ignore or obstruct." A piece of wishful rhetoric? Perhaps. Calculated to revive Kaiser Bill's nightmare of the "yellow peril"? Possibly. A foretaste of the greatest threat to Western supremacy since the industrial revolution? Definitely.

In a remarkable perceptive analysis, MacFarquhar noted that for the 200 years since the industrial revolution, the West has dominated the world. Today, he argued, that dominanace is threatened, not just by the Russians, partly heirs to the Western tradition anyway; nor by the Arabs whose stranglehold will last just so long as their oil; but more fundamentally by the East Asian heirs to Confucianism—China, Japan, Korea, Taiwan, Hong Kong, Singapore, and, to some degree, Vietnam. MacFarquhar concluded:

Confucianism is as important to the rise of the East Asian hypergrowth economies as the conjunction of Protestantism and the rise of capitalism in the West. The tenets of Confucianism still provide the inner compass to most East Asians in the post-Confucian age, just as the admonitions of the Sermon on the Mount still constitute the standard for the West in the post-religious era.

Another British Sinologist, D. Howard Smith has written, "Confucius is China's greatest gift to mankind." The aphorisms of Confucius (K'ung-fu-tzu), an obscure and frustrated official and extraordinary teacher (circa 551-479 B.C.), were set down by his disciples. They became the official ideology of China under the Han dynasty two centuries before Christ. Essentially, Confucianism is a philosophic justification of government by a benevolent bureaucracy under a virtuous ruler. According to one of the Confucian classics, virtue ensures obedience within a stratified society.

As a reporter who writes about peasant villagers, also contributes to *The Economist* and had met MacFarquhar in London some months earlier, I read the essay with great interest and decided at once to test MacFarquhar's theory by visiting villages in Japan, China, South Korea and Taiwan.

I began my exploration of MacFarquhar's ideas at the village level in Japan. My emphasis, of course, was lopsided as it wholly concerned agriculture, which in East Asia's fast-industrializing societies, is playing less and less of a role.

> **Confucianism still provides the inner compass to most East Asians . . . .**

I soon discovered a truly traditional Japanese village is hard to find outside a Samurai movie. A few such villages exist in the remote mountain hamlets or *buraku*, but elsewhere everything had very suddenly urbanized (I had not visited village Japan since 1954). Just 30 years ago, Japan was 60% rural; now over 75% of the Japanese live in cities of more than 50,000 people. Japan's thirteenfold increase in real gross national product during those 30 years has been the fastest economic growth of any big country ever. Where else would an astonishing 91% of the population, many of them ex-villagers, tell a recent public opinion poll that they regard themselves as middle class?

For a clear picture of traditional Confucian culture you need to go not to Japan, but to South Korea. The village I picked, and lived in for five weeks, was just 60 miles south of the North Korean border; some mornings children carried in propaganda pamphlets from the fields, floated down by balloons at night. Some in English said, "Americans, you will die." An American Peace Corpsman, a Texan, who was treating lepers in a neighboring village, told me that if North Korea should invade, "just head south over the hills to the nearest U.S. base."

It was not a comfortable time to be in South Korea. Yet my village, Cho Dong Kok, seemed remarkably peaceful, fitting the country's famous name as "the land of the morning calm."

This was a truly Confucian, not yet post-Confucian, society. The villagers still sought the ideals of individual perfection and a harmonious social order set down by Confucius 2,500 years ago. Daily life in Cho Dong Kok was shaped by ethical standards deeply rooted in the long Confucian rule of Korea's Yi dynasty (1382-1910), a period of extraordinary stability that, except for the 18 years of former President Park Chung Hee's government, was afterward followed by almost continuous strife. I arrived in the village assuming almost everybody had opposed Park's dictatorial rule; to my surprise I discovered that instead he was much respected.

For good reason. During the 1970s, average village family income in South Korea rose from about $800 a year to just under $3,000. Today everybody gets plenty to eat, all village children go to primary school, 90% go on to high school and a few pass the examinations to join 278,000 students in universities. Every South Korean village is electrified, almost every household has a TV set. Literacy is universal and no place in the country is more than a day's bus or train journey away. Daily field wages of $8-$10, plus meals, rice wine and cigarettes are as good, or better, than an unskilled worker gets in the towns. Almost every farmer still has his cow or ox but nearly 200,000 power tillers, an average of five per village, are hauling, plowing, harrowing and harvesting as they do in Japan. Japanese mechanical rice transplanters were being introduced this year, and both men and women, who now do 45% of the farming, were being trained to use them. Family-owned irrigation pumps have replaced the old water wheels. Rice seedlings and vegetables are grown in Japanese-style vinyl greenhouses.

Most of South Korea's agricultural revolution has come in the past 10 years, especially after the successful adoption in the early 1970s of new dwarf high-yield rice varieties. In 1977 South Korea overtook Japan and broke the world record for average yield per hectare (2.5 acres), with 4.9 tons of milled rice. Its farm science establishment, dominated by American-educated PhDs, invites comparison with Japan's.

Along with the new technology has come a doubling of the subsidized rice price since 1970, a spread of factories to the countryside so that village families now get 20% of their incomes off the farm and a fast expansion of transportation and the urban market.

Park liked to give credit also to his *Saemaul* (New Community) movement, which he launched in 1970. He had ignored agriculture to invest heavily in industry during the 1960s, causing droves of young villagers to migrate to the cities. The movement exhorted villagers with a Confucian-style slogan—"self-help, cooperation and diligence"—to build roads, bridges and wells and, most spectacularly, to replace their old thatched roofs with brightly-painted tile or metal ones, completely transforming the appearance of the countryside.

At first there was some coercion; laggards might come home to find their roofless walls open to the sky. But today most Koreans acknowledge the *Saemaul* movement was a big success, showing what villagers can do once they get capital, technology, access to markets and the active cooperation of local officials.

For all this, South Korea's 36,000 villages still remain as Confucian as ever. During last May's rice transplanting, when most students and workers came home to help for a few days, there were many angry exchanges between fathers and sons. One typical father in Cho Dong Kok, told his son, "If you young people make more noise in the cities, another tragedy will come. It's not good for us. Have I not tied my empty belt and boldly given money to send you to the university? I'm literate. I have a classical education. But I'm for the late President Park and what he stood for."

In talks with this family it was evident to me that the freedom the son wanted and was willing to fight in the streets to get was our Western concept of the right of the individual to decide and choose and act for himself. It went against the father's deeply ingrained Confucian belief in the subordination of the individual, whether to parents or to state.

Cho Dong Kok village (the name meant Place of the Confucian School) was set in what was called the Valley of the Swallows, a fitting name. Nesting swallows, for Korean peasants as for Macbeth, are a happy omen. While I was there the tiny birds were just migrating back and they darted in and out of almost every farmhouse to remake their nests in the ceiling beams.

Seoul was just a 90-minute bus ride away; in 26 years—I had last seen it as a soldier in the Korean War—it has become a great modern city of skyscrapers, subways and 8 million people. Yet it seemed worth remembering that until very recently Koreans were never urbanized; unlike in Japan, few rules of urban conduct yet exist. When I had last been in South Korea, stationed near Pusan, 80% of the population lived in villages; now only 29% or 11 million of the 38 million South Koreans do.

Just 25 years ago, farm households formed two-thirds of the total; this had dropped to one-third. Yet the number of farms has dropped hardly at all, suggesting, as in Japan, the importance of keeping village ties in a Confucian culture. Much farming is done by older men, of an age you used to see strolling about in white pajamas and black horse-hair hats (the hats have vanished completely).

Cho Dong Kok's rice fields, like most of South Korea's 5.7 million acres of cultivated land, nestle among pine-forested hills, which cover 70% of all land on the mountainous Korean peninsula. This rugged terrain might explain why the old Confucian and even shamanistic beliefs are so durable. Confucianism is an agnostic philosophy and villagers the world over seem to have a need for belief in magic, demons, evil spirits and exorcism. In Cho Dong Kok two elderly witches, *mudangs*, still were paid to wield their supernatural powers to protect families from evil spirits, a practice that was old in Korea 3,000 years ago.

Bone poor as China is, it is no poorer than South Korea or Taiwan were a generation ago. . . .

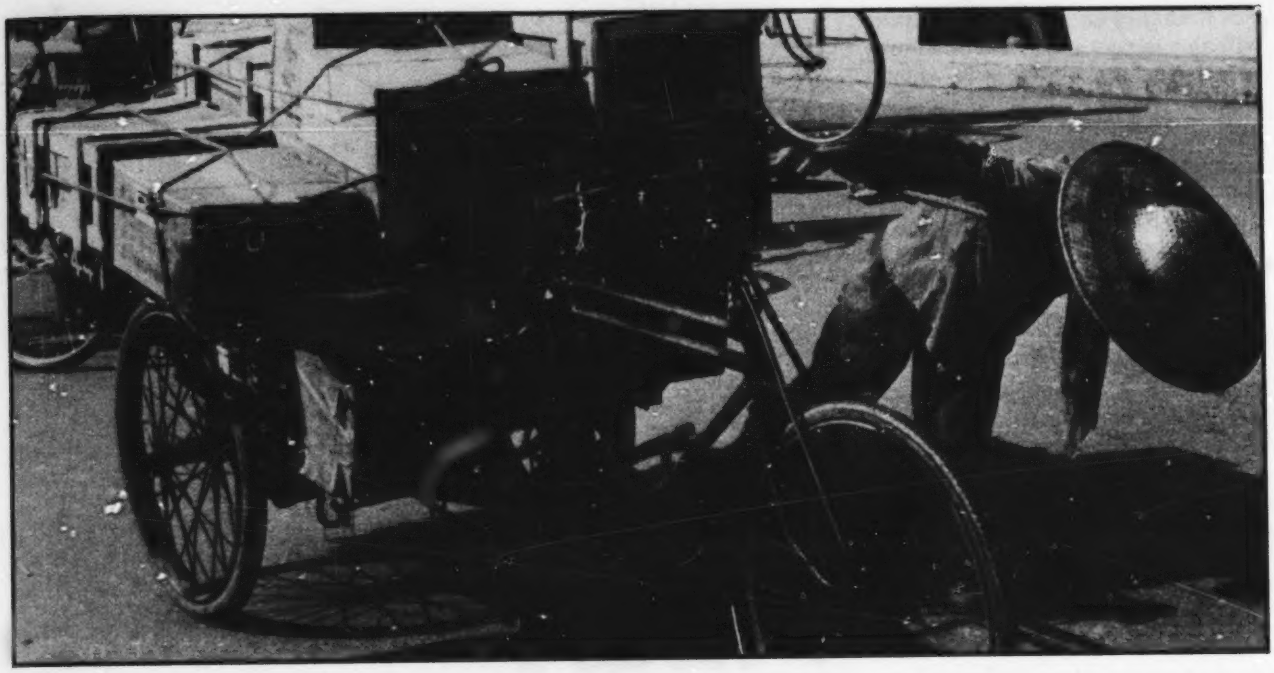
On the other side of the East China Sea, in Taiwan, where old customs survive with amazing strength in the villages, one finds more syncretic religious and philosophic beliefs, with Buddhism and especially Taoism equally strong. Taiwan's agricultural revolution came much earlier than South Korea's, though both carried out sweeping land reform in 1949-53, a few years after Japan did.

False populist promises of "land to the tillers" have always been a mainstay to practitioners of Leninist revolution. They worked so well for Mao Tse-tung, as well as the North Koreans, that Chiang Kai-shek's Kuomintang, like Syngman Rhee's government in Seoul, hastened to distribute land more equitably as soon as it fled to Taiwan in 1949.

So it's yet another sign of East Asia's new post-Mao, post-revolutionary but still Confucian age that Taiwan, following Japan's lead, is about to restore farm tenancy, wicked old absentee landlords and all. The economic pragmatists running things in Peking must be watching with bemused attention.

Taiwan's happy problem is that with a hyper-growth GNP that jumped from $10.7 billion to $32.3 billion in 1973-79 and that may approach $40 billion for 1980, only 1.4 million of the 18 million Taiwanese are still willing to farm. Unemployment, officially down to 1%, is practically nil. About 80% of Taiwan's 900,000 farms (average size: 2.5 acres) used to be triple-cropped 15 years ago; now less than 30% are. Farm labor is non-existent or too expensive ($12 to $17 daily, plus the usual meals, cigarettes and rice wine). Land reform was so throughgoing almost every tiller got some, but in Confucian custom a man divides his land among his sons when he dies and 40% of all farms are now down to 1-1.5 acres. Less than 18% of farm families make their living from agriculture; the average rural family gets 60% of its income from sons and daughters working in nearby towns.

As in Japan and South Korea, Taiwan's small farmers grow the crops which feed the cities and earn the foreign exchange to finance indus-



trialization. The Taiwanese do not yet edge their fields in concrete nor drive to them in cars, as the Japanese often do, but they are not far behind. Farms of just 10 acres may have a $10,000 combine; $2,000 power tillers are almost universal. The plastic greenhouses abound, 55% of rice transplanting is mechanized, herbicides have totally replaced hand weeding and the Taiwanese have even invented ingenious weighted paper pots so you can toss rice seedlings on the terraced mountain slopes and they land upright at just the correct depth. Indeed, the original dwarf gene that produced the short-stemmed, high-yield varieties that have revolutionized world rice production came from Taiwan.

The island is self-sufficient in fertilizer, made from coker or the air (using the Haber process invented by the Germans in the first world war). The Taiwanese apply a ton of nitrogen per 2.5 acres, just about what the Japanese do. More than half of Taiwan's cropland is irrigated from streams and 17 mountain reservoirs to catch the typhoon downpours; all were built since 1949 and seven more are planned. Again like South Korea and Japan, Taiwan is going nuclear, it has two power plants and plans to build six more by 1990.

With such high technology agriculture, Taiwan's villages surprisingly preserve more age-old traditions than even Korea. Step inside any household door, even in Taipei, and you face an altar with ancestral tablets, urns, joss sticks and a scroll with the image of Buddhist prosperity goddess Kuan Yim. It will almost certainly be flanked by a refrigerator, color TV, maybe a telephone (all Taiwan's villages are electrified), a desk for the schoolkids (universal ninth-grade education is compulsory), sacks of grain, even farm implements. Filial piety and ancestral worship are even stronger than in South Korea and there are also supernatural beliefs from popular Taoism. In a Taiwanese village you not only worry about what the neighbors will say but also about the opinions of a whole community of ancestral ghosts, deified heroes and Taoist gods, demons and even the spirits of trees and ponds.

The widespread belief that a man is merely the custodian of land, a living link between his ancestors and descendants, seems to explain why there is little trend toward larger farms, either in Taiwan, Japan or South Korea. This poses a problem for Taiwan's ruling Kuomintang. Last November they decided to launch what is called "second stage land reform." Initially, a $25 million fund has been set up to loan farmers money to buy more land at 6% annual interest over 20 years. But so far almost nobody wants to sell. The Taiwanese plan to speed up land consolidation and are studying ways to encourage more farmers to plow, sow and harvest in groups with ever bigger machines.

The real problem is that many villagers fear to rent ancestral land to their neighbors; memories are still fresh of what happened to absentee owners 30 years ago. What President Chiang Ching-kuo's government hopes to do is to make land tenure laws flexible enough so that mechanized farming can naturally evolve. This means reassuring the son unwilling to permanently part with inherited land, or the father who wants to keep some claim to the land in case of bad times.

The Taiwanese can grow far more

rice than they consume and this year will also import about 4 million tons of American grain, mostly animal feed, to improve diets (young Taiwanese, like young South Koreans or Japanese, are noticeably taller than their parents; they eat more protein). All three societies hope to balance better land use by fewer fulltime farmers with the need to preserve some farming population and food-growing capacity.

Its unique combination of age-old customs and the sophisticated farm technology they have survived makes a visitor to Taiwan feel he is glimpsing both China's past and its future. It is often said it will take China decades, perhaps a century, to rival Taiwan's living standards. Perhaps. But South Korea's agricultural revolution mostly came in just the single decade of the 1970s. In Peking I saw big-character posters to "learn from Taiwan in economy." The modernization of China's agriculture could come very, very fast.

For post-Mao China is just as much a Confucian society as any of the others; the significant coincidence between Japan, South Korea and Taiwan is culture, the shared heritage of centuries of inculcation with Confucianism. Until 1960, China never used chemical fertilizer. Just since the mid-1970s, it has built 14 1,000-ton-per-day anhydrous ammonia plants, and this summer it started to double capacity at 1,200 small oil- and coal-based fertilizer plants. The results have been spectacular. In 1978-79, China produced more wheat than the United States, 61 million tons to our 58 million. Within the next year or two, predicts Norman E. Borlaug, the 1970 Nobel Peace Prize winner for his work in developing high-yield wheat, China will become the world's No. 1 grain producer. And what's more, say Borlaug and other scientists who have visited China several times, increased use of fertilizer should easily increase China's wheat, rice and maize yields another 25% to 50% in the next 10 years.

Taiwan's villages surprisingly preserve more age-old traditions than even Korea.

In agriculture at least, if the present Chinese leaders keep to their pragmatic course, China could follow the path of South Korea or Taiwan, but on a gigantic scale. In MacFarquhar's words, this could make the economic miracles of the smaller East Asian countries "seem like solar flares against the sun."

Bone-poor as China is, it is no poorer than South Korea or Taiwan was a generation ago; there seemed to be no compelling reason then why they should not have stayed poor forever. Their Confucian civilization made the difference, giving its people a superb self-confidence with which to meet the technological challenge of the West. It is this civilization, and the individualist temper of ordinary Chinese that kept it alive there all these years, that has probably defeated, by outlasting, the rigid totalitarian system Mao tried to impose. The Japanese, Koreans and Chinese from Taiwan, Hong Kong and Singapore have arrived. So, in time, will the Middle Kingdom. And for the same cultural reasons. ☐

Editor's Note: Richard Critchfield has covered the Third World since 1959, the past 12 years from going to live in its villages. He is a special correspondent on rural development for "The Economist" of London and the "Christian Science Monitor," and writes for several other publications. He is a consultant to the Rockefeller Foundation and is associated with Ford Foundation and the American Universities Field Staff at Dartmouth. He is a former AID consultant.

His books include VILLAGES (Doubleday, 1981); SHAHHAT, AN EGYPTIAN (Syracuse University Press, 1979; Avon Books edition, 1980); THE GOLDEN BOWL BE BROKEN (Indiana University Press, 1974); THE LONG CHARADE (Harcourt, Brace & World, 1968); and THE INDIAN REPORTER'S GUIDE (Allied Pacific Private, Ltd., Bombay, 1962). In 1961 he edited and illustrated LORE AND LEGEND OF NEPAL by Nepalese author Kesar Lall.

The effects of deforestation in Haiti.

FEAR OF FAILING

It's one of the biggest obstacles to improved farming, but it can be overcome.

by Michael D. Benge

Haitian peasants cannot afford the risk of adopting new technologies, for to do so and fail spells disaster for them and their families.

The natural resource base of Haiti—like that of other developing countries—is being destroyed by accelerated deforestation and erosion, soil nutrient depletion and diminishing water. Haiti is one of the poorest countries in the world, with a per capita yearly income of less than $150 (in the rural area, less than $50). As the resource base is lost, the peasants are less and less able to meet their own most basic human needs—food, fuel and shelter. Over one-third of Haiti's arable land has already been rendered useless for agriculture; yields are among the world's lowest, and total agricultural output is declining 1% a year.

Charcoal and wood provide over 85% of Haiti's energy and the quest for fuelwood is a major cause of deforestation—the Haitians are literally burning their future. The generating capacity of the only hydroelectric plant, the Pelegrie Dam, has decreased by 45%; the cause: siltation, a direct result of deforestation. Salts leached from the soils of the denuded mountainsides are making lower-lying farmlands infertile. The water supply is decreasing because trees needed to cause rain water to infiltrate the soil and recharge groundwater reservoirs have been stripped from the hillsides. Frequent flooding destroys crops and farmlands. Streams are drying up and siltation is destroying fish and other aquatic life.

While Haiti's problems are serious and growing, they are not unique. Other Caribbean nations are facing similar problems, as are countries in Central and South America, Asia and Africa.

Deforestation of steeply sloping land for agriculture has been the major cause of soil erosion in many countries. Thus, any major undertaking in erosion control and reforestation must be done in conjunction with the peasant farmer and his farming practices. The peasant's main concern is to feed his family. Therefore, any erosion control-reforestation program must not detract from his need to grow food, collect firewood for sale or do whatever else he can to earn cash to buy food. Rather, the program must increase his agricultural production or income.

The subsistence farmer cannot afford to risk change, for to fail may bring disaster. Therefore, in the case of Haiti and countries like it, for now destructive practices to change, the farmer must sense no risk and believe that adopting new ways will result in an immediate crop yield increase. How to remove the risk so many peasants fear? One way is crop credit insurance.

Crop credit insurance programs have been used effectively in Indonesia, Taiwan, Bolivia, Panama and Ecuador. But efforts have tended to be isolated.

Just how could a crop credit insurance program work in Haiti, for example?

PHASE I—In the first part of the program a number of farmer leaders would be chosen and demonstration plots set up on their farms. The program would lease the farmer's land at fair market value and hire his labor at the local going wage for four years.

A contract between the project and the farmers would guarantee them a set yield if they adopt the new forestation-farming system demonstrated on their farms. The guarantee would be based on a high estimate of what land in that region produced in a good year or on what their farms produced with traditional methods. This system will provide most or all of the farmer's needs in fuelwood, livestock fodder and fertilizer, while controlling soil erosion.

The farmers should be provided the resources needed to implement the farming system on half of their land; the other half would still be farmed with the old methods. The farmers would be allowed to keep or sell all crops harvested. Thus, they not only benefit from their harvest, but also from a guaranteed income from the rent of their land, payment for their labor, and the crop insurance income guarantee. Moreover, because they still use their traditional and familiar farming practices on half the land, their fear of change is eased. This demonstration farm allows both farmer leaders and neighboring farmers to compare yields. Once the fact that increased yields can be obtained by adopting the agro-forestation system is demonstrated, phase II of the program can begin.

PHASE II—In this stage, neighboring farmers are invited to the demonstration sites for a discussion of the results. Those who would like to adopt the innovations could then be offered the resources to do so through a credit-crop insurance program, which provides resources needed to establish similar agro-forestation systems through a loan amortized over five years (this time frame could be extended).

Resources would include such items as improved seed, fertilizer, hired labor and the like. The project insures the farmers against crop failure for two years after the system is established. Again, the farmers are to be guaranteed a yield equal to a high estimate of what land in that region produced in a good year.

It should take two years before success can begin to be measured. In the meantime, loan repayment money could be placed in a revolving fund for continued development. When appropriate, the project can be evaluated by measuring crop-yield and

By proving crop yields can be increased with little risk, marginal farmers anywhere can be encouraged to adopt agro-forestction systems.

A village demonstration project in Haiti using Leucaena seedlings.

income increase, loan repayment and improved living standards.

A similar approach can be taken in tree planting (differentiated from agro-forestation, which combines tree planting with food production). Farmers could obtain loans as a form of crop insurance to buy tree seedlings. They would be paid under the loan for planting and maintaining the trees. Payments would come at planting and at six, 12 and 18 months after planting (suggested: 10 cents a tree for planting and 5 cents a tree each pay period for maintenance). Payments should be made upon inspection of the trees, verifying planting and maintenance. Repayment of the loan would be made at the time of harvest and sale of wood.

In Indonesia, Catholic Relief Services (CRS) has been very successful in carrying out this type of agro-forestation program for stabilizing slash-and-burn cultivators and increasing their crop yields. Flores, Indonesia, is an island comparable to La Gonave in Haiti in topography, climate and rainfall.

Denuded and eroding hillsides in Flores were treated with a system that incorporates contour-hillside ditching and the planting of *Leucaena leucocephala* on the berm of the ditch as a living erosion control barrier. This system was introduced for drought relief and interested farmers were supplied food (in place of credit, money or crop insurance) as a means of including them to adopt new technologies.

The CRS program has resulted in the end of slash-and-burn cultivation. Now farms extend over some 45,000 acres. The system has enabled farmers to work the same lands for over six years. Before this, the farmers were forced to move every one to three years to clear new lands. Their former practices brought about the decline of soil fertility, thus a decline in crop yields, to such a level that they could no longer provide subsistence to their families.

This new agro-forestation system not only substantially reduced soil erosion but increased crop yields, and streams that periodically dried up are now flowing year-round again. Part or all of the farmer's needs in wood fuel, livestock forage and organic fertilizer are being met.

Many of the farmers who adopted the agro-forestation system never received assistance from CRS. After seeing that neighbors increased crop production, and realizing that they no longer had to move to find new land to clear, they went to their neighbors for information, technology and plants.

By proving that crop yields can be increased and by reducing the risk of change, AID can encourage marginal farmers anywhere to adopt agro-forestation systems; trees will be planted and soil erosion will be reduced. Although not pulled into play in Indonesia, a farmer credit-insurance program could be the key to successful soil erosion control and reforestation—while increasing agricultural production—in Haiti and elsewhere. ☐

Michael D. Benge is an agroforester with AID's Office of Agriculture.

In Print:

Combatting Nutritional Blindness in Children

A Case Study of Technical Assistance in Indonesia

by Carl Fritz.
Pergamon Press.

A review by
Donald W. MacCorquodale

Several years ago while on a trip in Southeast Asia, I saw my first case of keratomalacia, a tiny child whose eyes had been converted into sightless, sodden lumps. I reacted with a mixture of rage and sorrow—rage at humankind's almost studied indifference to the well-being of so many of its children and sorrow for a fellow human being needlessly deprived of one of life's most priceless gifts. The technology for preventing keratomalacia and other forms of blindness due to vitamin A deficiency is simple and relatively inexpensive. Yet there are undoubtedly more nutritionally blind children today in the world than there were yesterday, and there will be still more tomorrow. Why?

Those interested in the answers would be well advised to read "Combating Nutritional Blindness in Children." Vitamin A deficiency is intimately related to development, and this brief volume is about development, or at least about the attempt to promote it.

The task facing the author, Carl Fritz, and his Indonesian and American colleagues working for Helen Keller International under an AID contract seems relatively simple at first glance. They were to develop estimates of the magnitude of the problem of eye disorders due to vitamin A deficiency in Indonesia, to provide additional insights into those factors which bring about these diseases, and to design a program to prevent them. When one considers the plethora of problems encountered in implementing the project, it is not surprising that it was not completed when Fritz finished this account. What is remarkable is the fact that so much was accomplished.

Many of the obstacles were a reflection of the culture of rural Indonesia and the poverty of its people. In one instance, the use of home remedies to treat early symptoms of an eye disorder caused a delay in seeking appropriate care, and the child went blind. Mothers were reluctant to allow blood samples to be taken from their children. Some families simply could not afford the costs of transportation to bring their children back to a hospital for follow-up care after they were treated for nutritional eye diseases.

The most formidable obstacles, however, had their origins in the American and Indonesian bureaucracies. At one point, it took Fritz and an Indonesian assistant several weeks (and not a little cash out of pocket) to get greatly needed equipment cleared through Indonesian customs. A number of items of equipment requested in September 1976 were not ordered until May 1977. Spare parts ordered for AID-purchased jeeps did not reach Indonesia until the project was finished. (I cannot help but wonder if the General Services Administration official responsible for the delays would have acted more promptly had he ever seen a child with keratomalacia.)

The author has high praise for the local AID mission, and indeed, it seems clear that essential data would not have been collected had the AID mission not lent Helen Keller International several vehicles at the beginning of the project.

Despite the problems mentioned and a host of others, the team did demonstrate that nutritional blindness is a formidable public health problem in Indonesia, one of much greater magnitude than previously realized, and plans were elaborated to combat vitamin A deficiency. The author gives much of the credit to the project scientist, Dr. Alfred Sommer, and his Indonesia coworkers. I have no doubt that this recognition is well deserved, but I rather suspect that Fritz was responsible for the relative success of this venture to a greater degree than he implies in this absorbing work.

I heartily recommend this book to all who are interested in the development process. I find myself hoping that it will be read by AID's detractors, who insist that AID is woefully ineffective. This well documented treatise suggests that AID's supporters can make an excellent case for the opposite view. ☐

Donald W. MacCorquodale is a physician on the technical resources staff of AID's Asia Bureau.

WHAT THE MEDIA SAY...

Mark MacGuigan, Canada's external affairs minister, provided us with a bit of interesting news at the foreign minister's session in Cancun. The United States, said Mr. MacGuigan, has accepted the process of global negotiations.

In order to catch the significance of this—and it is highly significant—you have to understand those code words "global negotiations." What Mr. MacGuigan was saying was that the United States, goaded by Canada and Europe at the Ottawa summit, accepted the principle of a vast and inflationary income transfer from the developed nations to the so-called Third World. Before Mr. MacGuigan's description of what the United States agreed to at Ottawa becomes gospel . . . we urge the President to tell him it isn't so.

The developed countries that are pushing global negotiations are, in effect, asking the United States to finance continued world trade with renewed inflation. But the United States can go to Cancun with a different idea.

It can clearly reject SDR (Special Drawing Rights) aid and instead insist on a global order which will continue to make credit available through the IMF but conditional on the adoption of policies that will truly benefit the poor. That means that countries that have destroyed their domestic agriculture with price controls, communes and other forms of state regimentation must free their farmers once more and allow them to grow food. It means that they must stop using government jobs to featherbed a political elite. It means, in some cases, removing oppressive tax burdens. In short, they must follow development policies that actually work if we are to tax our people to help them finance their development.

—Wall Street Journal

As World Bank President Clausen sees it, the challenge of the 1980s will be to find the right blend of bilateral, multilateral and private-sector aid for poor countries, instead of allowing a confrontation to develop among backers of the various kinds of help.

He feels he must be supportive of Reagan's efforts to reduce government spending, because a reduction of inflationary pressures would help everyone, including the Third World. At the same time, he senses that throughout the world, "the mood is moving against ever-increasing grants."

—Hobart Rowen
Washington Post

It is doubtful that the United States can ever regain its preeminence in the old-time sense—and Moscow has certainly lost its global influence despite its arms buildup. But the United States can and should be seeking ways to utilize its immense non-military resources on behalf of fostering a more orderly, productive and peaceful world. Here it *is* in a position to provide respected leadership and vision.

—Christian Science Monitor

At the Ottawa summit, Western leaders got their first collective look at Ronald Reagan. They discovered that this is a President who knows what he wants, one who will not take any guff.

Canada's Prime Minister Trudeau, ambitious to become the darling of the Third World, had no luck at all in his efforts to stampede Reagan into agreeing to pump massive aid—at triple the present U.S. level—into the underdeveloped nations, some of them under Communist influence and unfriendly to the United States.

Reagan pledged only that the United States would consider promoting free enterprise. . . . Wisely, he resisted pleas for no-strings-attached aid for the Third World—the kind of handout that in the past has put billions into the pockets of despotic rulers and thieves who care little for the welfare of their impoverished masses.

Americans at the summit noted that the Europeans, eager to see more U.S. taxpayers' money going to underdeveloped nations, are not entirely motivated by altruism. The prosperity of Western Europe, far more than ours, depends on the increase of European trade with the underdeveloped world.

—Marvin Stone
U.S. News & World Repo

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OR

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DEVELOPMENT UPDATE

This year the world lost two men deeply committed to wiping out famine and hunger. Their contributions are their memorials.

Sterling Wortman, plant geneticist and leader in the Green Revolution, died May 26, at age 58. He helped found the International Rice Research Institute (IRRI) in the Philippines and the International Maize and Wheat Research Center (CIMMYT) in Mexico, two institutes in the AID-supported Consultative Group for International Research. His success in helping develop high-yielding "miracle grains" won him the 1975 Jacob C. Wilson award for achievement in International Development.

Harry Chapin, singer and composer, who gave away as much as $8 million in proceeds from his concerts to causes—mostly hunger—died in an auto crash July 17, at 38. Known to millions for such popular songs as "Taxi," and "Cats in the Cradle," Chapin became involved in fighting hunger in 1973, at the time of the Sahelian drought. His influence helped bring about World Hunger Year, an educational organization started in 1975; the Food Policy Center; the Presidential Commission on World Hunger and the Hunger Elimination Act of 1981. A memorial fund to continue Chapin's crusade has been established. Electra Records, one of the companies that recorded his songs, has donated $10,000. Contributions may be sent to PO Box 538, Huntington, NY 11743.

While food shortages persist in 22 African countries, reports from other parts of the continent seem to herald an end to the two-year drought. For the first time in three years, most countries in southern Africa are harvesting a good grain crop and in most of West Africa and the Sahel growing conditions are normal or favorable, reports the U.N. Food and Agriculture Organization. Countries still afflicted by adverse crop conditions include Angola, Mozambique, Ethiopia, Tanzania, Morocco and Madagascar.

Rain—in some cases to flood proportions—has fallen in Djibouti, Somalia, Kenya, northern Uganda and southern Ethiopia. But persistent pockets of drought together with flooding, streams of refugees and the slow arrival of food imports and aid to replenish exhausted stocks have kept millions of Africans on the edge of hunger, FAO reports.

World dominance by the United States in the export of certain agricultural commodities is increasingly seen as a possible source of economic and diplomatic strength. Such exports in large quantities, for example, helped cushion the U.S. economy from the effects of increasing prices for imported oil. But serious concerns have been raised about the ability of U.S. agriculture to provide long-term sustainable production at prices that people—in this country and abroad—can afford. Will future supplies of land, water and energy be enough? Will production be reduced by climate change, declining soil fertility or pest infestations? Will agricultural research continue to provide ways to increase output?

agenda

Cover: October 16 has been designated World Food Day. Then, as on any other day, millions of children throughout the world will go to bed hungry. Millions will die from malnutrition. And that day, as on any other, the United States, through public and private voluntary efforts will be working to save them. This issue is devoted to discussions of these efforts.

Cover Photo: Marty Nordstrom

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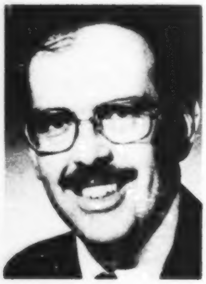
WORLD FOOD DAY

by M. Peter McPherson



Despite increasing world food production, more than 800 million people are seriously undernourished. Half these hungry people are children less than 5 years old who will bear all their lives the physical and mental scars of this early deprivation. Lack of money to buy or grow food and the difficulty of storing and transporting it are the major causes of hunger.

Not a pretty picture. But it is one that all nations must face, especially as we approach World Food Day, Oct. 16.

Food deficits in the Third World are expected to get worse as Third World populations continue to grow. Of particular concern are the African countries. Africa has the highest yearly rate of natural population growth of any developing region, averaging 2.9%. That growth is expected to continue because the factors encouraging high fertility will change very little. Africa is also the only region of the world where per capita food production has declined over the past 20 years.

So long as hunger and disease are the rule, economic and social development cannot take place and millions of people will continue to live in poverty, deprived of basic human needs and dignity. When people are hungry they become dissatisfied and unhappy. Often, this unrest leads to political instability. Upheaval in the Third World inevitably has an effect on the United States, which depends on these countries for natural resources.

The long-term answer rests with the developing countries—they must meet their own food needs. And they can; the Third World contains more than 70% of the world's arable land.

Better and more food will ease but not solve development problems. If people cannot afford it, all the food in the world will do them little good.

The causes of hunger are complex and have economic, political, social and cultural dimensions. The alleviation of hunger is equally complex, involving not only increased food production but higher incomes and better nutrition, health and other needs. Population growth and resources management are also part of hunger's equation.

Recognizing the complexity of the problem, AID coordinates its programs in agriculture, rural development and nutrition. Nearly 200 agriculturalists—including agronomists, project managers, livestock advisers, extension advisors, irrigation experts and others—are in Third World countries, working with the Peace Corps and U.S. private voluntary organizations.

To increase agricultural production and incomes, AID programs improve poor farmers' access to credit, markets and technology. AID seeks to promote innovations that encourage self-help efforts, such as the Mahaweli Basin new land irrigation project in Sri Lanka. An AID loan to that country will directly benefit 15,300 small farmers and landless families, providing them with technical production and marketing services, fertilizer and seed.

In many developing countries, significant increases in agricultural productivity can be made only through new knowledge and improved technology that permits higher output per unit of limited resources. There is considerable evidence that some of the highest returns on investment in agricultural development result from agricultural research. New technical contributions to solving agricultural problems are being advanced through the Title XII Food and Agricultural Development Program, which brings agricultural research, education and production expertise in U.S. universities to bear on the world food problem. Through this collaborative program, AID is funding rsearch on small ruminant animals and sorghum and millet—the meat and grain source for the poorest of the poor—and is planning activities in soil management, integrated pest management and post-harvest food losses, with plans for more projects. An example of the AID-university effort is South Dakota State University's work with the Botswana government to create a locally staffed training facility for agriculture, animal health and community development.

Other agricultural activities assisted by the agency include helping Indonesian farmers terrace their farmlands so excess water will flow to a nearby ditch instead of rushing down a hill, carrying away topsoil.

In Nepal, where 94% of the people survive on agriculture, farmers are testing AID's cereals projects to determine the technology that fits them best. As varieties are perfected, additional food crops introduced and more effective growing methods adopted, production is increasing and the farmers' lives and those of their neighbors are improving.

Efforts such as the one I've noted may mean the difference between life and death for a lot of people. It's important that the United States—for its immediate and long-term security needs—continue to provide assistance to Third World countries so they can learn to produce enough food for the well-being of their citizens.

The United States will continue on "World Food Day" as on every other day to work with other nations and international agencies to work toward wiping out hunger. We take this occasion, too, to urge the governments of the developing countries themselves—particularly those with the poorest and hungriest people—to adopt policies best calculated to stimulate and sustain their own development.

We pledge again our assistance to developing countries in initiating and implementing these policies. Cooperatively, we will move closer to the shared ideal of an adequate diet every day for all men, women, and children. The ideals of world peace and the advance of our civilization require that we do so.

Dear Mr. McPherson:

First, please let met introduce myself so you will have some basis to assess what I am writing about and why I am addressing you.

I am presently Professor Emeritus of Rural Sociology at the University of Missouri-Columbia where I have been the past 10 years. From 1951 to 1970, I served as the Ford Foundation's representative in India. Since joining the University of Missouri, I have worked in Tanzania and Tunisia. On behalf of the International Association of Agricultural Economics, the U.N.'s Fund for Population and Food and Agriculture Organization, I organized a symposium held in Rome in December 1976 to bring together the significant interrelationships from the 1974 World Food and World Population Conferences. Also, I have written a book which was published by the Iowa State University Press under the title of "Conquest of World Hunger and Poverty," a copy of which is being sent to you under separate cover.

Since I have worked on food, hunger, poverty and population issues throughout my professional career, I am writing to share with you what I think have been some of the significant conclusions to be drawn from the past three decades, conclusions with implications in selecting agriculture and food-related program strategies for the decade ahead.

1. One of the most important conclusions is that food to feed the people is not so much a production problem as it is a problem of gross inequalities in the developing countries.

2. Hunger has its roots in poverty. People are poor because they are denied either access to production resources or opportunities to work and earn enough to meet basic human needs.

3. Food, hunger, poverty and population are all interrelated.

4. While plans are conceived in material, economic and social terms, their achievement necessitates that all development be accepted as being first and foremost human resource development. Only as people become self-reliant and self-respecting will the material and economic components of development be achieved.

5. The selection of technology in the future must be accepted as an ethical issue. One criterion must be whether it will contribute to a more just society.

6. The implementation of land and institutional reforms and the development of trustworthy institutions to serve all segments of agricultural and rural development must be prerequisites for achieving enough food and for opening up opportunities for the tillers of uneconomic land holdings and landless laborers to become economically and socially self-reliant. Only then can they achieve sufficient food for their families.

7. The backdrop influencing all phases of development must be understood and accepted as being the process of transforming traditional societies and moving them toward modern societies. In realizing this, we must accept that it will take a long time for change to occur and development goals to be achieved. While some goals can be achieved within a decade, the basic and fundamental cultural changes must be viewed as requiring generations.

After reflection on these conclusions and examining a number of possible program strategies, it would seem that the strategy most appropriate would be this: an interrelated approach to food, hunger, poverty and population issues within a rural program development

I see AID as being in a unique position to provide leadership and stimulus to the developing countries, urging and assisting them in formulating needed national policies to carry out effectively this interrelated approach.

The U.S. land-grant and other universities working under the Title XII program can, in my judgment, effectively meet the challenge of assisting the developing countries in implementing a program development strategy that interrelates food, hunger, poverty and population issues.

Douglas Ensminger
University of Missouri-Columbia
College of Agriculture
Department of Rural Sociology

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FOOD FOR PEACE: Where Is It Going?

An Interview with Julia Chang Bloch

The following interview was conducted with Julia Chang Bloch, recently confirmed AID assistant administrator for Food for Peace and Voluntary Assistance. A former Peace Corps volunteer, Ms. Bloch has been a fellow of the Institute of Politics at Harvard University, deputy director of African affairs at the International Communication Agency, a training and evaluation officer for the Peace Corps, and has served on the minority staff of the Senate Select Committee on Nutrition and Human Needs. She was born and reared in China and came to the United States in 1951 as a refugee.

Q. In recent years it has been said that AID's food aid programs have not received sufficient attention from the top—have taken a back seat to other development assistance thrusts. What is the position of this Administration vis-a-vis PL 480?

A. This Administration considers PL 480 a valuable resource, an important development tool and a key element of our foreign policy. It is our principal humanitarian response to disasters and refugee assistance.

Peter McPherson has indicated to me that PL 480 must be treated as an equal with dollar assistance programs. Even though food aid does not have the flexibility of dollar assistance, it can still be used as an effective development resource in many food deficit countries if properly planned and negotiated. Food aid cannot operate separately from dollar assistance. The two forms of assistance can and should complement and supplement one another.

Q. Has the budget for PL 480 programs in fiscal 1982 been increased? If so, what in concrete terms will this mean for the programs?

A. The Administration's budget initially proposed for fiscal 82 is higher than the fiscal 81 program. However, the final fiscal 82 mark from OMB has not been announced yet. Reductions may be required in order to live within overall budget constraints; therefore, it is too early to be assured of increased levels for fiscal 82. Even if dollar levels are constant for fiscal 82, commodity prices are now lower than in fiscal 81, and we may be able to purchase the same amount for less money. If lower prices do not offset future cuts, then there could be a negative effect on some programs. Therefore, we must succeed in improving the impact of our program.

Q. What are the Agency's food aid priorities for the 80s?

A. AID will place developmental uses of PL 480, especially in food production, high on its list during the 80s. In the past, PL 480 was generally viewed as a resource transfer to maintain levels of consumption and alleviate balance-of-payments difficulties in recipient countries. While this aid is important to the developing countries' nutritional and financial situation, it is necessary to encourage recipient countries to look beyond the resource transfer and emphasize investments which have an impact on production and productivity.

We are reviewing all elements of the food aid program with the objective of strengthening those where greater returns and developmental impact can be achieved through the concentration of staff and dollar resources. Because these resources are limited and declining, marginal or weak programs not only will receive less emphasis but could be eliminated. Terms of sales programs will be re-examined.

We are surveying programs to select those countries where food aid can be employed so as to make a real difference in their food sectors and contribute to self-sufficiency. New initiatives will be applied in these cases.

Q. There has been mention of "integrating" Food for Peace programs with other development activities. What do you mean by this?

A. By integration we mean both the planning and implementation of our food and non-food aid programs in a mutually reinforcing way to help recipient countries manage and finance their food requirements and move toward greater food self-sufficiency.

AID has continued to increase its emphasis on the need to integrate its food aid programs into overall country programming strategy. The guidance for the preparation of Country Development Strategy Statements (CDSS) has urged field missions to focus more directly on this development resource and to devise ways to link it more closely and compatibly with dollar-financed aid. Moreover missions have begun to consider methods of strengthening the impact of Title I and Title II programs by capitalizing on opportunities for the mutual support of these programs.

Integration of development resources is possible at the policy, program and project level. It may be reflected in the linking of important policy reform objectives to both food and non-food aid programs. It may be seen in country programs where food aid facilitates major institutional or policy reform while dollar activities develop infrastructure necessary to support increased agricultural production over the longer term—complementing local currency generated for development by PL 480. Or, food aid may undergird a country's efforts to develop an effective grain stabilization effort, while other forms of assistance might help establish essential storage and marketing facilities.

In all cases, the basic purpose is to maximize the effectiveness and efficiency of scarce foreign aid. In this regard, the degree to which this resource is to be employed as an integral part of country strategy and programming will be an increasingly important factor in determining future PL 480 allocations.

Q. Food aid in general has received some criticism of late. Providing food has been called counter-productive, a disincentive, a giveaway that leads to dependency. How do you respond to this?

A. It is, of course, necessary to be alert to the danger that food aid to developing countries will create a disincentive to agricultural production and a dependency on food imports and foreign aid. Therefore, it is our job to program food aid carefully to avoid these dangers. Recipient countries must be convinced that food aid is only a "stop-gap," as you say. The food as well as the resources it may generate must be directed toward achieving greater agricultural self-sufficiency. Governments cannot ignore policy and institutional reform in favor of short-term food aid.

Food aid programs have an important role to play in helping countries become self-sufficient. This is why I have stressed the role of an integrated policy and program approach. By helping a country deal with the uncertainties and dislocations of structural adjustment and policy reform, which could adversely affect food availabilities in the near-term, food aid can, with other forms of assistance, facilitate needed change.

Q. What can the Agency do to have our own people, in Washington and overseas, treat food aid as a resource—a valuable one?

A. The Agency a a whole must be made to understand that food aid today constitutes 20-25% of the foreign assistance budget. Given current trends in foreign assistance appropriations, food aid will become increasingly a critical component of development assistance resources—one which cannot be taken for granted. Unless the Agency moves to use food aid more effectively, public and Congressional support for PL 480 may erode, leading to a diminution or loss of a valuable development resource. AID staff people both in Washington and overseas, I believe, are committed to alleviating the problems of hunger and malnutrition. Given adequate policy guidance, programming support and management encouragement, they will respond.

Q. What are your plans to increase the involvement of private voluntary organizations in food aid programs?

A. Voluntary agencies have played a key role in food aid during the past 25 years. They have been the principal distributors of Title II grant assistance. AID relies heavily on voluntary agencies to distribute food to the needy in times of emergency. Voluntary agencies must also be viewed as important instruments of development. I do not believe that the full potential of the PVOs has been tapped. Voluntary agencies by their very nature can contribute to the development of the human resources of developing countries. Many of the U.S. PVOs have indigenous counterpart agencies that have evolved, through participation in food programs, in the areas of agriculture, health, nutrition, rural and community development administration and management.

Voluntary agencies are aware that food is a development resource and are willing to explore means to better coordinate their food aid distribution programs, both private and public. Further, we must work together to ensure that the PVO programs have measurable positive impact, and lead to sustained improvements in the lives of the poor.

Q. In the coming years, will there be an increased emphasis on helping the private sector within developing countries?

A. Greater private sector involvement in food aid programs as well as in AID's overall development efforts is being actively encouraged. There has been growing skepticism about the efficiency and effectiveness of a variety of public sector approaches, which in large measure have displaced private sector initiative in developing countries. Where undue interference with free market forces has not been helpful and has acted as a disincentive to domestic agricultural production, we will work with countries to achieve desired structural adjustments. Food aid can play an important role in this process. Countries that are hesitant to ease excessive controls over the marketing of basic grains can be encouraged to do so by the provision of adequate stocks of food to protect against feared disruptions in supplies to urban and rural consumers.

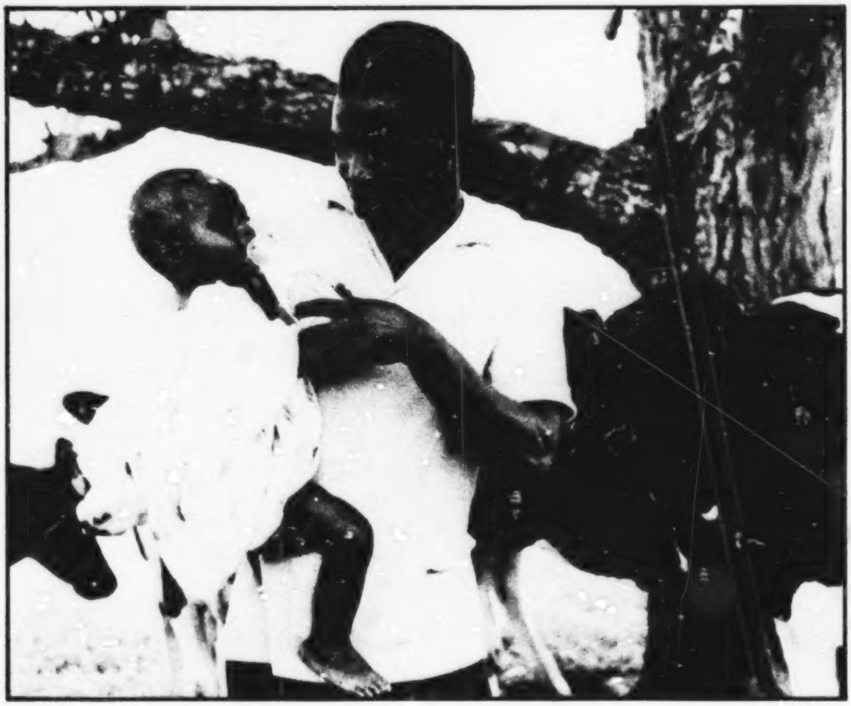
We have noted examples of ineffective government intervention in marketing and transportation. We will seek to focus our policy dialogues with recipient countries on these situations, and support efforts to stimulate private initiative.

REACHING A CONSENSUS

A recent seminar at ODC outlined problems and solutions.

On June 17, the Overseas Development Council convened an all-day seminar on world food security. One of its major purposes was to make recommendations as to the position the United States might take on the issue at the meeting of 22 heads of government in Cancun, Mexico, later this month. The seminar was off-the-record, so far as individual identification is concerned.

ODC is an independent, non-profit institution whose purpose is to increase American understanding of the developing nations and their importance to the United States. ODC programs in public education, and the analysis of development problems are supported by foundations, corporations, individuals, and international organizations. One of its activities is a program of seminars and discussions on a wide range of issues encompassed within the general concept of international development. The seminar on world food security was part of that program.



Leverage points for action, long-term considerations regarding world food security, and the U.S. role in the international food system were three main areas of discussion during the day-long session attended by 40 participants from public interest groups, the academic world, and legislative and executive branches of government.

Following are some of the areas of agreement reached as outlined by ODC President John W. Sewell in a letter to President Reagan:

- **The decade ahead is more likely to be one of food shortages than of surpluses. Food production is barely keeping pace with population growth, and as affluence increases in industrialized and developing countries, the pressure on food supplies, food prices and the agricultural resource base in the food-exporting countries will intensify.**
- **These factors underscore the importance of giving the world food situation high priority on the agenda of the upcoming summit meeting. This conviction was emphasized by Maurice Williams, executive director of the World Food Council, who reported that the 36 cabinet ministers participating in his organization felt that the world food situation is**

at least as precarious now as it was a year ago, especially for sub-Saharan Africa.

- Food aid to the food-deficit countries must be continued—and indeed must be increased—as an immediate effort to relieve hunger and suffering, but it should be related more to development goals. Food provided merely as relief can act, and has sometimes acted, to discourage local food production. Some sort of reserve or insurance scheme also may be required for the intermediate period while food-deficit countries improve their food systems, but establishment of a reserve to stabilize market prices for grains seems unlikely at this time.
- The World Food Council's food-sector strategy approach deserves support, as Secretary of Agriculture Block said at the World Food Council meeting in May. Under this approach, individual countries develop national food plans with the assistance of the World Food Council and national and international development agencies. The food sector strategy views a country's food system as a whole and tries to modify it accordingly in order to bring about genuine and lasting improvement in production, distribution and consumption—and thus improvement in nutrition. Between 30 and 50 countries have now expressed their desire to institute such a strategy.
- Scientific and technological advances will be necessary to improve the food situation, but they are not enough by themselves; a food-deficit country's policies and the amount of external investment—either public or private—in agriculture are equally important. The technology introduced must be appropriate, adaptable to the perceived needs of the users and of minimal economic risk.
- In this connection there is a continuing need for research. The intention of the Secretary of Agriculture to increase U.S. government outlays for research was strongly supported, with emphasis on ensuring that a good part of it must be related to the needs of poor farmers in the tropics, especially for dry-land agriculture.
- Particular attention must be paid to the role of women in the food system; they do about half the producing and nearly all the processing of food in the developing countries, but do not have equal access to land, agricultural inputs and services, or the benefits of an improving food system.
- Liberalizing trade, especially in agricultural products, is of advantage to both the United States and the food-deficit countries and deserves continuing support. We need to sell our food to them, but they cannot afford to buy without the foreign exchange that their exports earn.
- Food should not be used as an instrument of U.S. foreign policy against the weak. Whether it should be used in this way against the strong should depend on its effectiveness—and its comparative advantage—as a policy vehicle.
- U.S. policy should be concerned about the international food situation for the reasons stated by the Presidential Commission on World Hunger: it is in the U.S. economic interest, in terms of moderating food prices and preserving the U.S. agricultural resource base; it is in the U.S. security interest; and it is congruent with U.S. moral and political principles.
- The private business sector must be drawn into the food policy and development area more than it is now. The Hunger Commission's recommendation that the President convene a meeting of business leaders to discuss this matter was endorsed.

In summary, it was the belief of the organizers and the participants, who represented a wide spectrum of expertise and philosophy, that the summit conference will be of great importance for both the industrialized countries of the North and the developing countries of the South in coming to grips with problems of common concern. ☐

HOME GARDENS . . . Not So Easy

In one Indonesian village, the effort is failing.

by Carol J. Pierce Colfer

In Indonesia, it is the women who tend the gardens.

In efforts to improve nutrition and provide additional sources of cash income to poor families, developers are seriously considering home gardening. In light of this burgeoning interest, I offer the following "case study" of home gardening efforts in Long Segar, an East Kalimantan village in Indonesia.

I lived and worked in Long Segar from October 1979, through August 1980, doing ethnographic research as part of a project funded by the U.S. Forest Service—U.S. Man and the Biosphere (MAB) program "Consortium for the Study of Man's Relationship with the Global Environment." The project was administered by the East-West Center.

Long Segar is located two days and a night by riverboat from Samarinda, the provincial capital and nearest "urban" market. In Long Segar live approximately 1,000 Christian Dayaks—Kenyah who voluntarily settled there between 1963 and 1972 from the Apo Kayan, an extremely remote area near the Malaysian border. Between 1972 and 1980, Long Segar was officially a "resettlement village." This means that a comparatively large amount of government aid has been available to the community in the form of seeds, seedlings, breeding stock of pigs, cows and water buffalo, tools, village machinery, pesticides, fertilizers, medicines, even money for housing construction, as well as agricultural extension personnel, teachers, and training opportunities.

In November 1979, the vice president of Indonesia, Adam Malik, came to the village. Before he left, he made a gift of cabbage, spinach, green bean, eggplant and cucumber seeds. These are typical vegetables being encouraged for home gardens. Then, after about a third of the rice harvest was lost in December, the government provided several types of herbaceous legumes for the people to plant for food and as supplemental, emergency cash crops.

In February 1980, 15 villagers went to Samarinda for training in a variety of farming activities including gardening, and after the training they shared their new knowledge with other villagers. In July, a German aid team began planning some experimentation with multiple cropping systems and expected to provide seeds and whatever else was necessary for success. And in August, a pilot home gardening project focusing on income generation for women was proposed.

The prospects for success were certainly good. But something went wrong.

A month-long research trip to Long Ampung, from which the people of Long Segar came, uncovered a curious fact. The children in Long Ampung are healthier, fewer die in childhood than in Long Segar. In Long Ampung, the diet includes more "lekai," or rice-supplementing dishes, including garden produce and forest plants and animals. There are many more gardens in the village and these are well-tended. The—at first blush—anomalous reality is that Long Segar, with all the above-mentioned official activity to stimulate home gardening, is *less* involved in gardening than Long Ampung, which gets none of the same kinds of help.

What happened? To understand that, it is necessary to look at several factors.

The only reliable cash crop in Long Segar is rice. And in an environment where everyone eats rice three times a day, and indeed cannot imagine life without rice three times a day, there is always a market for rice. It can be stored for long periods of time, in huts built high off the ground and protected from rats and mice. And if by some strange occurrence, the rice shouldn't sell, it can be consumed the next year or be divided among needy relatives and friends.

But vegetables are a different ball game. Although home gardens have been part of the Kenyah adaptation to life in the rainforest, they haven't taken on a whole series of cultural symbols in the way that rice production has. People can tell you exactly how many "kalengs" (an 18 liter container that holds 11 kilos of unhulled rice) of rice they planted and harvested for the past 17 years, for example, but they cannot remember where they made their vegetable garden last year. It's just not important.

There are a few garden areas within the village proper, and people tend to plant a few seeds right around their houses. Fruit trees such as the soursop, pumello, papaya and orange, are planted in house yards and in the forest nearby. Everyone has access to some garden produce, and sharing food is probably the most important value held by the Kenyah. But the lush gardens characteristic of Long Ampung have not appeared in Long Segar.

There are three major areas that have caused problems for the gardening effort in Long Segar: training, production problems and marketing constraints.

Men receive the training in gardening, but the women do the work.

Seeds were brought to the community and distributed to male "household heads;" village men were brought to Samarinda for training in vegetable production and the key farmers in the German aid team's experiments were men. But traditionally women make the gardens. Furthermore, since men traditionally "go on expeditions," which now include wage earning sojourns in distant cities, once they're trained, they may very well leave taking their training with them.

Certainly there are difficulties in reaching women: Fewer women than men know the Indonesian language; women are reticient about dealing with outsiders; officials and extension workers often are fearful of trying to work with women.

The second major set of constraints revolves around the production. First of all, rice production is considered the economic core of the community, so other agricultural activities are scheduled around the growing cycle of rice. Rice production is done by shifting cultivation. There are busy times of the year in the fall for planting and weeding, in the winter for harvesting, and in the late spring for clearing new fields for the next season. During these busy times, people go to the fields and stay all week, since the fields are some distance from home. Since school children and many old people stay in the village, it is sometimes possible to arrange for the care of the vegetable gardens, but more often than not, these arrangements are not made.

Fertilizers and pesticides, more necessary for garden vegetables than for rice, usually cost money, and money is in short supply. Even when fertilizers and pesticides are promised by the government, sometimes they don't arrive—usually because of poor transportation. Although Long Segar can be reached in 35 minutes by plane or 10 hours by speedboat, trade is normally carried on by longboat, which takes a mini-

When the rice is ready for planting, gardens take a back seat.

mum of two days and a night from Samarinda. Although the boats come fairly frequently, there is no set schedule, and if the river conditions are bad, then several days may pass before a boat arrives. And whether or not the longboats happen to be carrying what the farmer needs when he needs it is a matter of luck. During the 1980 season, there was an infestation of grasshoppers. Anxious to control them, the farmers resorted to pesticides they knew were not appropriate, because they had nothing else.

Animals present still another production problem.

The gardens that are not right near the house are likely to be eaten by wild deer or boar. Gardens in the village are subject to the six, free-roaming water buffalo and 11 cows. The village animals were a well-meant gift from the government of

Programs Are Not Working, Nutrition Scientists Warn

83 countries meet to discuss findings at the XII International Congress of Nutrition.

by Angela Wright

Do feeding programs, food aid and nutrition education—all aimed at tackling food problems and decreasing malnutrition in the Third World—work?

No. That was the sobering consensus of some 2,531 nutritional scientists from 83 countries meeting recently in San Diego. They came together for the XII International Congress of Nutrition sponsored every three years by the International Union of Nutritional Sciences (IUNS).

Warning that food aid depresses the local productive capacity and creates dependency, Fred Sai, interregional coordinator for the United Nations University, maintained that it should be given in accordance with people's needs, rather than with the providers' ability to provide certain foods. He went on to urge that nutrition play an important part in all development activities.

Another participant took a more radical stance. D. K. Soedjatmoko, director of the U.N. University, called for a global food stamp program. Soedjatmoko said the plan should be financed by all industrialized countries, including OPEC members, to "provide a nutritional floor for the poorest of the poor at a feasible cost.

"Moreover an international food reserve is needed to ensure the availability of food at a reasonable cost during shortages."

The conference, which featured 1,100 presentations covering topics ranging from biochemical and clinical research to national food policies, served as a forum for discussions of current world food and nutrition problems and possible antidotes.

For example, in Guyana, nutritional anemias have become recognized as a major public health problem. One study presented points to iron and folic acid deficiencies and intestinal parasites as possible causes.

Dr. John Murray and Dr. A. B.

Indonesia, but the people were not used to such large animals, had no tradition of eating beef, no storage capacity, and no way to get them to their fields. So, they roam. The animals have ruined many gardens since their arrival in 1975.

There is no refrigeration in Long Segar, at least not for vegetables. Although there are three generators, they are used for freezing a local-style popsicle and for village electricity. Consequently, vegetables do not last long.

The closest markets are two timber companies and one plantation. They range from 20 minutes upstream, to an hour and a half downstream. The largest company is the farthest away, and many's the time the people of Long Segar have loaded up their canoes and traversed the dangerous rapids near the camp, only to discover that no one wanted cabbage that day. Because of the lack of communication up and down the river, there was no way of knowing that ahead of time.

I would like to emphasize that solutions to these problems are quite possible—and can be worked out locally. People who, for one reason or another, are genuinely concerned that a vegetable crop succeed take the time needed to build fences to keep out the marauding cows. Pesticides and fertilizers can be stockpiled in the village. And so on.

But the reality is that right now there are too many constraints for the people to overcome.

When I questioned the villagers, in groups and alone, they said they needed help with everything—durable fencing, reliable delivery of pesticides and fertilizers, help with marketing and credit. They felt that the government had simply dumped seeds in their laps, and then blamed the villagers when they could not solve the problems on their own.

Kenyah are reluctant to expose women to embarrassing or degrading situations. Nevertheless, community members are aware of, and value women's involvement in farming. When I was about to leave, I asked the villagers what they would consider a valuable project—one that, given the opportunity, I might suggest to churches or other organizations in the United States. They suggested building a dormitory in Samarinda so the Kenyah girls could pursue their education, while living in safe and honorable conditions. □

Carol J. Pierce Colfer is a specialist in Women in Development at the University of Hawaii at Manoa.

Murray from the University of Minnesota Medical School, followed milk-drinking African nomads for eight years. The nomads, say the Murrays, enjoy an unusual freedom from jaundice and hepatitis.

But, say the majority of the participants, without matching methods of producing foods and of teaching principles of proper diet to the culture of people in any given country, there will be no solution to the vast and growing problem of malnutrition.

Take just one example—the West Indies, where some of the mistakes of the past can be clearly seen, according to Dr. Norge Jerome, nutritionist, anthropologist and professor of community health at the University of Kansas School of Medicine. Quoted in the *San Diego Tribune*, Dr. Jerome says that according to a colonial tradition, cash crops for export are encouraged over food production for consumption at home.

"Traditionally that model brought profits for the mother country," Jerome explains, "but it does not meet the needs of poor who do not benefit from the sales of export items. Under that system, crops such as cocoa, bananas and spices are produced for export and staples such as flour, sugar, rice and even fish—when the seas abound with them—are purchased from other countries."

What is needed, she says, is "to help the people learn to grow crops they can in backyard fashion —to take responsibility for producing their own food."

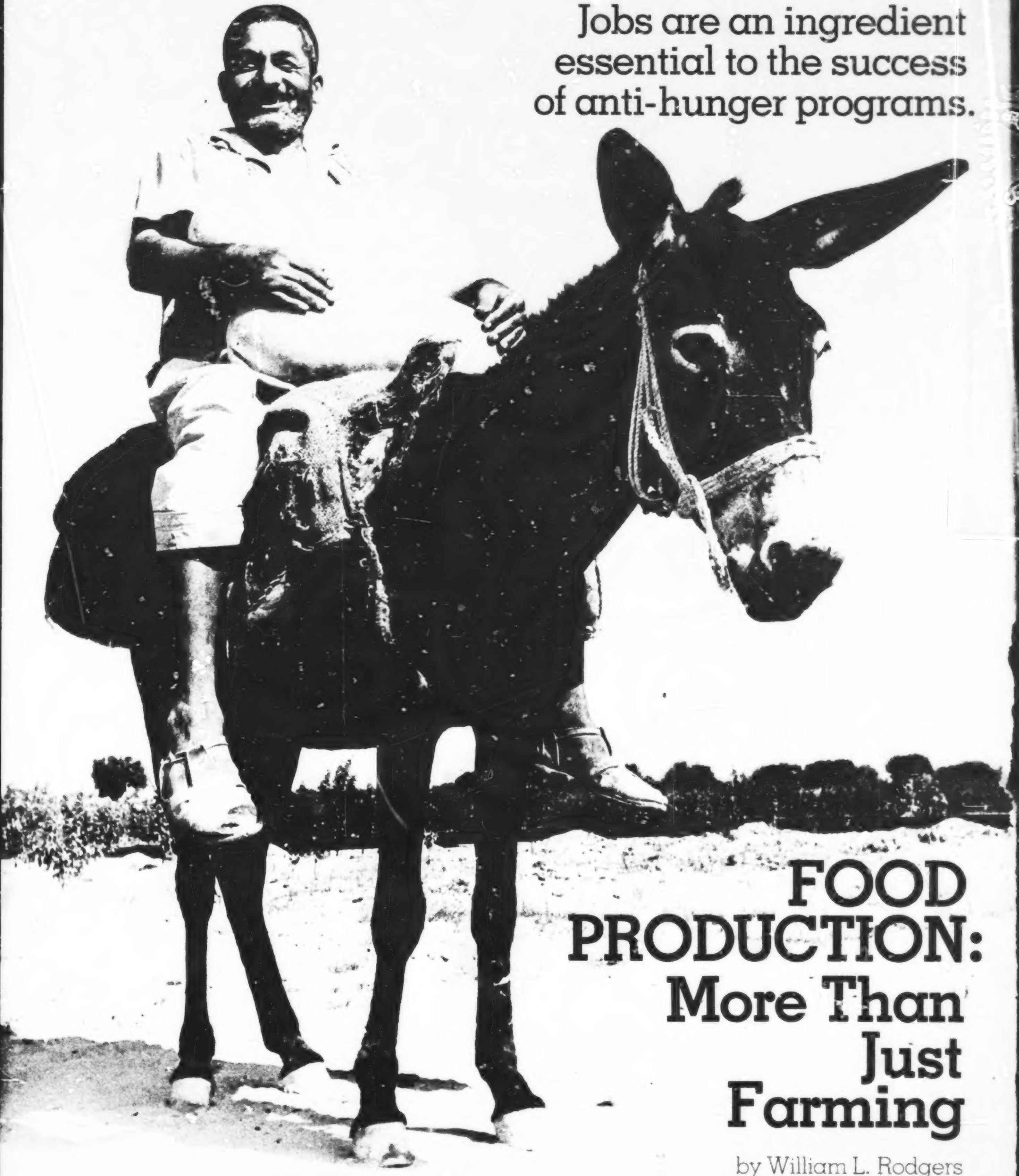
Emphasizing the importance of using teaching methods that "fit into the culture," she explains in the *Tribune:* "In the Caribbean, educational information might be mounted on the calypsos. These are ditties, some of them quite catchy, that are formulated and rehearsed each year before festival time. They are then sung throughout the year. They are a natural form of communication..."

The conference closed on a somber note, offered by John Hawthorne, a professor at the University of Strathclyde Glasgow in Scotland:

"Some analysts have calculated that if there were only about 1 billion people on earth, and if resources were equally shared, all could enjoy a relatively high quality of life." But the world population is now 4.5 billion, and food as well as energy resources are stretched to the limit, he said.

"One action that is needed," Hawthorne continued, "is for man to control his numbers." Yet that will be perhaps the most difficult task of all. "Ultimately it is up to each individual to reduce population growth. Clearly, if man does not control his numbers, nature will." □

Angela Wright is a public information officer in AID's Office of Public Affairs.



Jobs are an ingredient essential to the success of anti-hunger programs.

FOOD PRODUCTION: More Than Just Farming

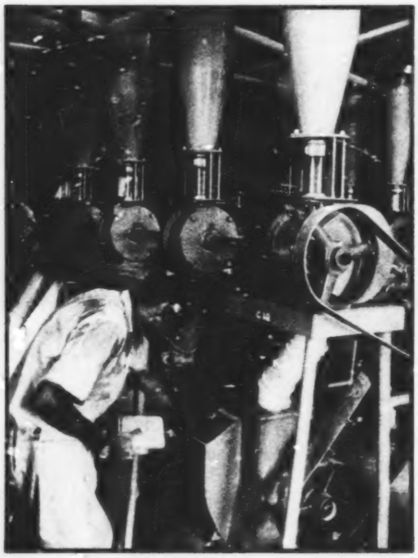
by William L. Rodgers

Storing corn for later sale.

Efforts to improve the world food situation have focused primarily on increasing production. In reality, however, a nation's food system depends on several other interlocking functions as well. As food technologists understand better than many development economists, the fruit of a farmer's labor does not end up on anyone's dinner plate until it has been processed, distributed and, finally, bought by consumers. Therefore, meeting world food needs means devising national strategies that stress not only food production, but distribution and consumption.

Global Food and Hunger Problems

The reports of the Presidential Commission on World Hunger and the Brandt Commission, along with the Global 2000 Report, all provide ample evidence of the continuing urgency of the hunger situation. According to these most recent studies, at least half a billion people—one out of eight in the world today—are malnourished. Over half of the malnourished—more than the entire U.S. population—are children under age 5.



In India, private mills hire workers to process food.

The President's Commission found that chronic malnutrition, not famine or mass starvation, is at the root of the world hunger problem. Hunger is caused essentially by poverty, and in spite of some important gains, it is likely to get worse. Having identified hunger primarily as a problem of poverty, the Commission further concluded that "a nation's nutritional needs cannot be effectively addressed in isolation from broader social and economic programs that increase overall productivity and the incomes of the poor."

This means that even if production gains and postharvest systems were sufficient to eliminate the "food" problem, the "hunger" problem would remain for tens of millions. Who are these unfortunates? They include the landless and unemployed, people in areas where food production can only be minimal, and people with special nutritional needs—pregnant and nursing women, for example. That is why any successful anti-hunger strategy must combine production efforts with programs designed to raise the incomes of the rural poor. The key is more jobs.

It is an awesome challenge—and one in which the private sector may play a major role.

Since most developing countries depend heavily on agriculture, we have to look to agriculture for the jobs as well as the food.

However, if the farm sector is to flourish, it must be sustained by what economists like to call *effective demand.* To put it simply, before farmers will take the risks they believe are involved in raising production, they must feel confident that there will be buyers for their increased harvests. And in order to boost effective demand—to guarantee the buyers—literally millions of jobs will have to be created. Fortunately, this can be a self-reinforcing cycle: as farm yields increase, new jobs will open—to provide supporting goods, services and markets in rural areas. And finally, to complete the cycle, rising incomes among country folk should create a new demand for both agricultural and consumer products.

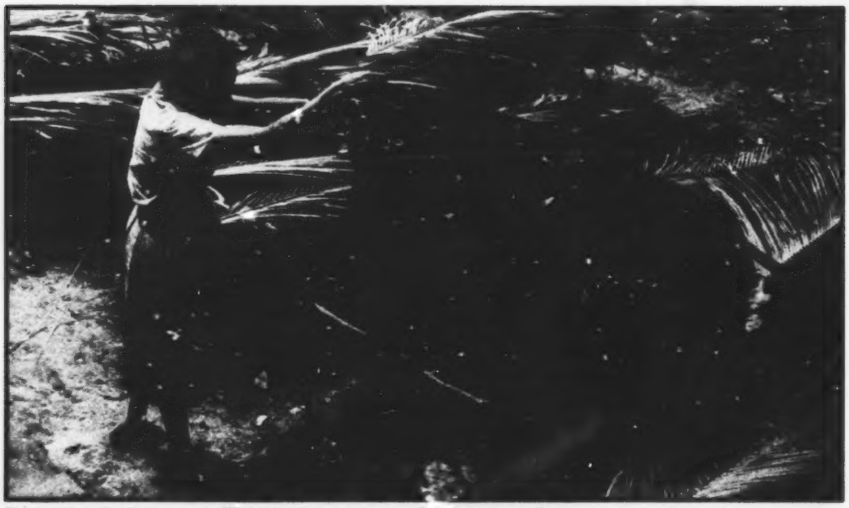
Training food technologists for all stages of this process is essential: to run the local industries which process, package, store and transport the increasing agricultural output.

What is needed

In most poorer countries, agricultural development has little chance—mostly because government institutions and policies are not sufficiently developed. Often, in fact, pervasive institutional weakness—

including the lack of trained specialists—is a problem even more serious than is the lack of financial resources. Many donor projects fail, and a great deal of money is lost because of it. Paradoxically, international donors think largely in terms of capital needs and compete strongly with each other for access to the limited number of trained personnel within any given country. These well-meaning donors are actually making excessive demands while contributing little.

Technology must be well-adapted to a farmer's needs—and ability.



Protecting fruit tree seedlings is important to this farming effort.

To take one case: Hundreds of millions of dollars have been loaned to Tanzania by the developed nations for a "crash" food production program—one that is now generally recognized as a nearly total failure. A recent evaluation concluded that "the single overwhelming cause of project failure has been deficient implementation capacity." So it is that with the best of intentions, a government cannot efficiently use large amounts of money to expand food production without a corresponding depth of human and institutional resources.

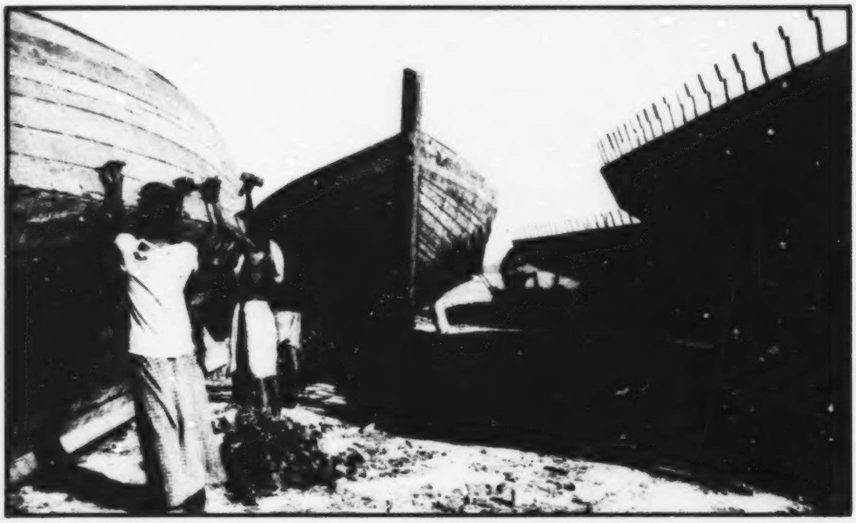
Even if everyone had adequate purchasing power, there would still be bottlenecks causing problems for food production—lack of technical knowledge, inadequate irrigation, insufficient production inputs (fertilizer and seed, for example) and/or credit.

The European experience in technological and economic development offers some insight. When Europeans colonized other parts of the world, they made the same mistakes that the Romans had made in northern Europe. Both attempted to transplant their own technology in agriculture, industry and education, without attempting to make them fit the new cultural and environmental conditions. Not surprisingly, many of their schemes failed. And perhaps just as predictably, the climate and the people of the colonies were blamed. Just as northern Europe was considered too cold to be inhabited in a civilized manner, it was argued that the tropics were too hot and humid for long term economic development.

Similarly, the failure of many projects of technology transfer in the colonial and post-colonial period have given rise to charges that technology has failed. Yet when a set of tools designed to solve one problem is applied to another, different problem, it seems understandable that the tools may not always work. That does not mean the technology has failed—merely that it was used inappropriately.

In the developing nations around the world, more than half the people are involved in agriculture: 40-60% in Latin America; 60-80% in Asia; and 60-90% in Africa. The percentage of of women working in agriculture is more than 85% in many African and Asian countries. There can be little argument that with properly used and adapted technology, not only would productivity rise, but young people would have more time for training and education, and women, more time for other important tasks.

At the national or regional level there is a definite need for institutions and mechanisms that can make the introduction of new technology easier. Engineering colleges, vocational and management schools and various professional training institutions are all needed. Moreover, in



Fishing industries require boats; boats require builders.

Small-scale farm-businesses can open many opportunities.

almost every instance there is a clear need for responsive credit and financial institutions, and for communication and transportation services.

The Role of Agribusiness

The rural economy in any developing country is made up of many interlocking systems. Farms, small businesses, commerce and services operate in an integrated fashion. Growth and development also take place in an integrated fashion. As a key component within this system, small and medium-sized businesses related to farming can perform a number of highly important functions.

Small-scale agribusiness can open markets, provide credit and technical links to small farmers. This will directly expand job opportunities for both farm and landless families in agricultural production and off-farm enterprises. This expansion will be sorely needed. The labor force in the countryside is expected to jump by 50% by the year 2000.

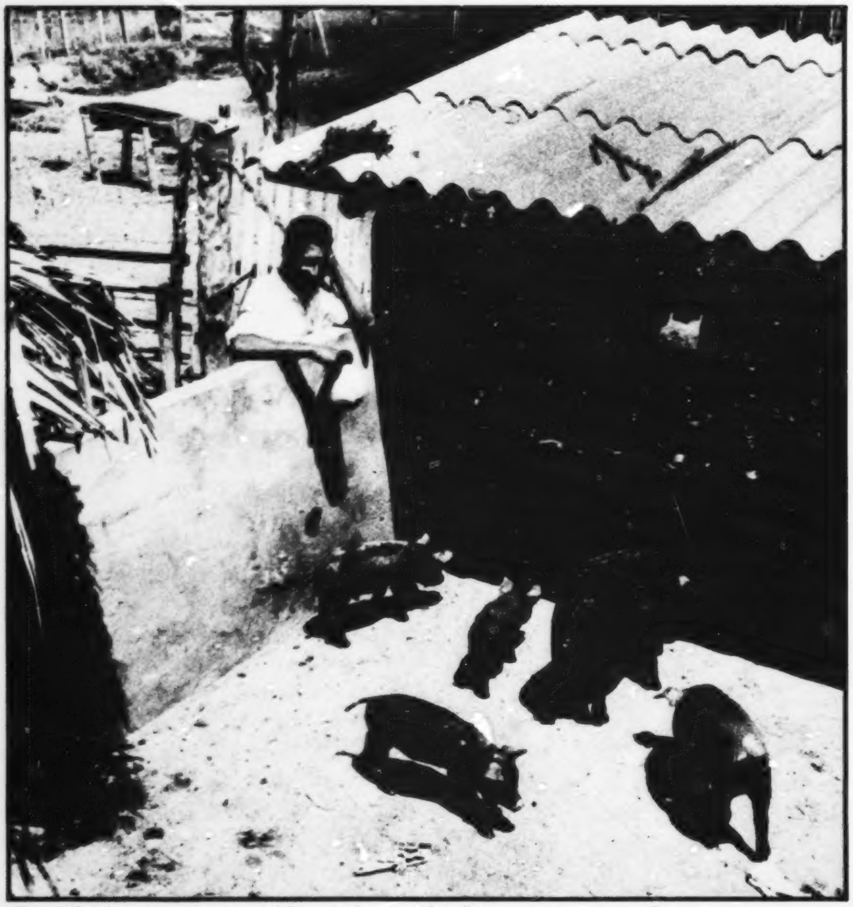
In terms of the technical potential of small agro-industries, there is much to be done in the area of post-harvest food losses. Of the agricultural commodities consumed as food,, grains (cereals, legumes, oilseeds) contribute the bulk of the world's calories and protein. Before the harvest reaches the consumer, it must be dried, processed, transported and stored. At each of these points losses may be—and often are—incurred. The reduction and prevention of post-harvest grain losses, especially those caused by insects, micro-organisms, rodents and birds, is a cost effective way to increase available food particularly in those developing countries where the losses are largest and the need is greatest.

We still do not have statistically significant data on the full extent of postharvest food losses. For planning purpose, however, 10% is used as an average minimum loss for cereal grains and legumes; 20%, for perishables. Using these figures and the most recent FAO production data for total developing country production, during 1979, approximately 63 million tons of cereal and legume crops were lost as food. Also during that year, 100 million tons of root, tuber, fruit, vegetable and nut crops were wasted. The loss of cereals and pulses in the developing world alone would have supplied the annual minimum caloric requirements (250 kg of cereal grains per year, per person) for 252 million people—more than the population of the United States.

The value of the lost cereals and pulses to the developing countries amounts to an estimated $11 billion a year, based on a price of $170 per metric ton of grain. It is harder to estimate the value of the perishable commodities lost, because prices fluctuate widely. However, the tonnage of lost perishable commodities exceeds that of lost grain and legume crops. These estimates are rough, but they represent losses which occur over and over again during the storage and processing of these commodities each year.

Conserving agricultural raw materials is only one dimension of the contribution a sound agribusiness sector could make. Suppliers for seeds, fertilizer, pesticides, implements, and food processing machinery who can service agriculture more efficiently, the processors who use farm products, and finally, the marketing sector, constitute other key components. All can be improved.

In Jamaica, for instance, the amount of food that was formerly wasted between the farm gate and individual schools was cut by 40% just by applying management controls. This meant that the Jamaican government could feed more children a more nutritious meal (meeting one-third of their daily requirements), at lower cost. In addition, the advent of centralized purchasing power resulted in higher quality standards for the fresh fruits and vegetables supplied by local farmers.



This Colombian farmer started his pig farm with a low-cost government loan.

Stumbling Blocks

Despite the benefits of small agribusinesses, there are a number of constraints common to Third World countries which, when left unchecked, can nullify any benefits.

Government disincentives are one. They may take the form of factor-price distortions where artifically low interest rates and overvalued foreign exchange make buying mechanized equipment more attractive—when, in fact abundant, cheap labor and scarce capital should favor the development of labor-intensive operations. Other types of government disincentives include taxes and tariffs which favor large firms, giving them artificial advantages over small ones, or burdensome rules and regulations such as those requiring overly detailed reports, records and licensing. And the lack of managerial ability can be serious.

Often a small entrepreneur's limitations are further aggravated by his inability to obtain current technical information. This is especially true outside of the metropolitan areas. Consequently, decisions about technology, production processes and planning, inventory levels, and the like often are made using outdated and inefficient practices.

Lack of credit is still another constraint. Many firms are forced to rely on personal savings, money from friends or relatives, and moneylenders. They therefore find it difficult to obtain working capital or long-term credit on a timely basis and on reasonable terms.

In the area of raw materials and equipment, large-scale firms again enjoy several advantages. They can make bulk purchases, have procurement staffs, and more political, social, and financial influence with both the government and suppliers. These translate into price advantages and invaluable control in developing countries, where the supplies and sales networks are often inade-

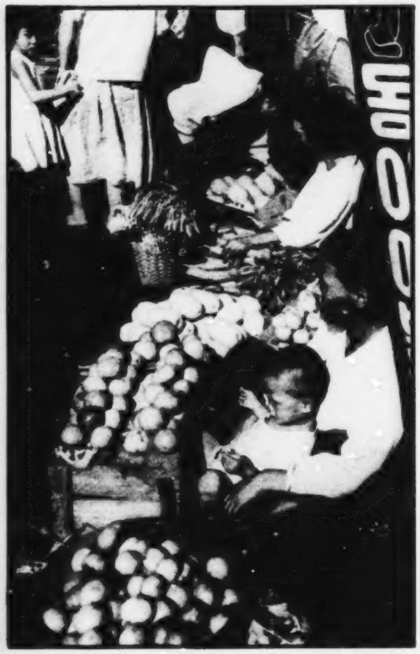
Without jobs, people cannot buy food to feed their families.

quately developed and where raw materials and equipment are usually in chronically short supply.

Managerial and technical advice in all critical areas—marketing, production, accounting, management, and finance—is usually offered through a variety of mechanisms. More often than not, the best mechanisms are private agribusiness and food technology companies.

Where U.S. Business Fits In

A recent study on U.S. business and the transfer of agricultural technology documents the widespread need for U.S. business in the intermediate technology field. Thirty-two government and private parties in 10 developing countries taking part in the study said they had a definite interest in cooperating with U.S. firms in the manufacture of intermediate agricultural equipment in their countries. According to the researchers, aid organizations involved in providing development assistance also advocate more business activity in developing simple technological processes, in putting management skills to use, and in developing, financing, and evaluating appropriate technology currently in use in various countries.



Most small farmers take produce to market.

As for the U.S. firms themselves, the report says: "firms producing intermediate agricultural equipment such as hand-operated compressed air sprayers, feed trucks, garden cultivators and seeders, fertilizer spreaders, chisel plows, two-wheel tractors and attachments, grinder mixers and hammermills, prefer exporting, but indicate interest in alternatives such as consultancy, joint ventures and licensing."

In sum, U.S. agribusiness and food technology companies, both multinationals and small or medium industries, represent a major pool of untapped human and financial resources for overseas development. By entering into training and managerial contracts with U.S. agribusiness companies, AID and other donors could have a catalytic effect on agricultural development in the Third World—in large part by facilitating the flow of private capital to small-scale agriculture businesses overseas.

But if these projects are to have the desired effect, they will have to consider the question of jobs. There are two basic ways to insure that agribusiness projects generate a substantial number of them—first, by focusing on products that are highly labor-intensive. Second, all goods should be processed with techniques that use a higher number of workers. Examining labor-intensity of products should take into account both the growing and processing stages. Labor represents a high proportion of total costs in the processing of fruits and vegetables, at almost all levels of technology. So, U.S. food technologists trained to minimize labor—and therefore, costs—in food processing will need to be sensitive to the difference in developing country projects.

Despite the constraints that still prevail in many developing nations, and notwithstanding the adjustments that are inevitably required in standard operating procedures, U.S. private investment abroad could be both possible and profitable.

Making It Work

AID and other donors have had some experience in supporting projects to help small businesses. One example is the Latin American Agribusiness Development Corporation (LAAD). This company specializes in financing and developing agribusiness projects in Latin America and the Caribbean. Its shareholders include 14 U.S. companies as well as a number of banks. LAAD was designed to substantially augment the capabilities of a unique regional private effort to deal with Central American agribusiness as a whole, with emphasis on the promotion of non-traditional exports.

In a 1977 evaluation, Checchi and Company reported that LAAD had been successful in encouraging the development of non-traditional exports. The Checchi report also stated that small farmers had benefited from assured markets for higher value crops and greater price stability when processing plants entered into contracts with them. The 110 projects LAAD has financed in 12 countries since 1970 have created thousands of new rural jobs and are generating over $50 million in new exports every year.

AID also is supporting the Fund for Multinational Management Education in exploring ways in which multinational companies, governments, and intermediary organizations can cooperate in solving agricultural and rural development problems in developing countries. Intermediary organizations are those public and private, profit and nonprofit institutions that mobilize corporate, government and/or international agency resources to undertake projects aimed at making rural areas economically viable. The project also will develop new networks of corporate executives, government officials, and intermediary organization personnel needed. Finally, the project will establish models for private and public cooperation.

The Industry Council for Development (ICD) is another intermediary which is promoting and assisting U.S. agribusiness firms meet development needs. The Commercial Seeds Industry Development project was established by ICD to help improve the effectiveness of seed enterprises in developing countries. With AID support, this project is pushing partnerships among seed businesses in all parts of the world. In October 1980, AID established another vehicle for assisting the Third World with its food problems. The Postharvest Institute for Perishables, called PIP, was established at the University of Idaho to provide expertise in reducing and preventing root, tuber, fruit, vegetable and spice losses. The PIP will send teams to developing countries to demonstrate improved processing, storage, and packaging techniques for perishables. It will provide training in the United States as well as in the developing countries themselves. And it will establish a voluntary network of donor organizations, trade associations and research centers interested in reducing losses.

In addition, the Postharvest Institute will conduct automated data searches and provide technical documents free of charge to interested parties in developing countries. It will develop commodity bibliographies and simple extension reports on ways to conserve perishables. The effort is especially important because it will focus on perishable commodities that can not only provide needed calories and nutrients, but can also be sold for export.

Currently AID is formulating an International Small Business Investment Companies project. This project, if approved, will create a mechanism for putting both U.S. and local capital and management skills to work to help small and medium-sized businesses. The concept is based on the U.S. Small Business Administration's small business investment companies that provide long-term and equity financing, as well as technical assistance, to small businesses.

An Indian farmer fertilizes his field.

The strategy: to induce private firms in developing countries to invest in small businesses initially outside of large metropolitan areas. As in the United States, the major incentive will be the availability of sufficient long-term funding to allow an internal debt/equity ratio of up to 3:1. Leverage funds will be made available by AID through either direct loans, guarantees of private sector loans, or co-financing schemes. Once a mechanism is functioning, the private investors will have substantial financial interest in ensuring that it and its portfolio companies are viable.

AID is also planning a Center for Intermediary Services (CIS). The proposed center will facilitate the transfer of technology and managerial expertise from the U.S. private sector to small and medium-sized agro-industries in the Third World, largely through developing and financing management and technical support contracts. The center will be a clearinghouse of information for U.S. small businesses interested in developing country business opportunities. It will be organized as a private, non-profit entity. This will allow it to charge for services, attract private sector funding, establish operating procedures that require minimal paperwork and have the flexibility needed to establish good working relationships with the private sector.

Many other U.S. organizations already have devised ways to become involved in Third World development. For example, the Institute of Food Technologists has an existing network which allows its members to directly participate in development assistance. The League for International Food Education, L.I.F.E., is a consortium of eight professional societies including the Institute. The American Institute of Chemical Engineers, The American Assoc. of Cereal Chemists, the American Society of Agronomy, the American Chemical Society, the American Institute of Nutrition, the American Society of Agricultural Engineers, and the American Oil Chemists Society also are consortium members of L.I.F.E. The League has recently undertaken a study to identify ways of mobilizing local resources for solving malnutrition problems in Latin America.

To sum up, there is a role—a growing one—for U.S. food technology in a hungry world. This country has unique technical and managerial capabilities which can serve this world. And developing countries represent huge new markets for American goods and services. They also represent a source of specialized materials and food supplies. The increasing ability to communicate freely worldwide is encouraging the developing world to seek the industrial expertise known to exist elsewhere. No society, including our own, is prepared to remain at a given stage of industrial and economic development indefinitely. U.S. industry possesses the expertise to help developing countries derive far more from their own resources. That expertise is the scarcest and most essential tool in the development process. ☐

William L. Rodgers is chief of the agribusiness section in AID's Office of Agriculture.

by Kobina Danson

NIGERIA FISHES FOR SELF-SUFFICIENCY

A new crash program to boost fish production is taking shape.

The traditional Nigerian fishermen of a few years back cast their nets from dugout canoes, and even paddled out to brave the rollers of the Atlantic Ocean. Fishing was more an art than a science, and its scope was limited to supplying the fish required by the fishermen, their families, and their neighbours.

But under a government-sponsored crash program to increase the country's fish production, fishing is taking on a new look. Thanks to advanced science and technology many fishermen are becoming fish farmers in Nigeria.

Spearheading the program are the Federal Institute of Oceanography and Marine Research, and the Research Institutes of Kanji Dam and Lake Chad. Their combined research efforts recently paid off when they successfully induced a local freshwater fish called *abori* (scientifically known as *Clarias Lazea*) to breed artificially.

The technique involves injecting the fish with a hormone extract from fish belonging to the same species. Five thousand tiny fish fry were produced as a result of the experiment, which gave a boost to the Federal Ministry of Agriculture's fish seed multiplication program.

The program eventually will establish fish seed multiplication centers in all 19 states. Two such centers—at Tiga in Kano State and Maska in Kaduna State—are already operating. Once a reliable supply of fish seed is available more Nigerians will be lured into fish farming. This should do much to increase the supply of fish for domestic consumption.

But fish farming alone cannot meet the nation's needs, so as part of the accelerated fish production program the Ministry is also helping to modernize the fishing industry. Large numbers of modern canoes, equipped with outboard motors and nylon nets, are being distributed through the state governments, and the fishermen are being taught how to use and maintain them. Landing bases, stores, and fuel depots are also being established.

Lack of processing and storage facilities had posed a major problem for the fishing industry in the past. But no more. Improved smoking kilns are under construction at strategic fishing locations for local processing. The government also has embarked on a program to build 123 cold stores throughout the country. These will be serviced by a fleet of refrigerated vans.

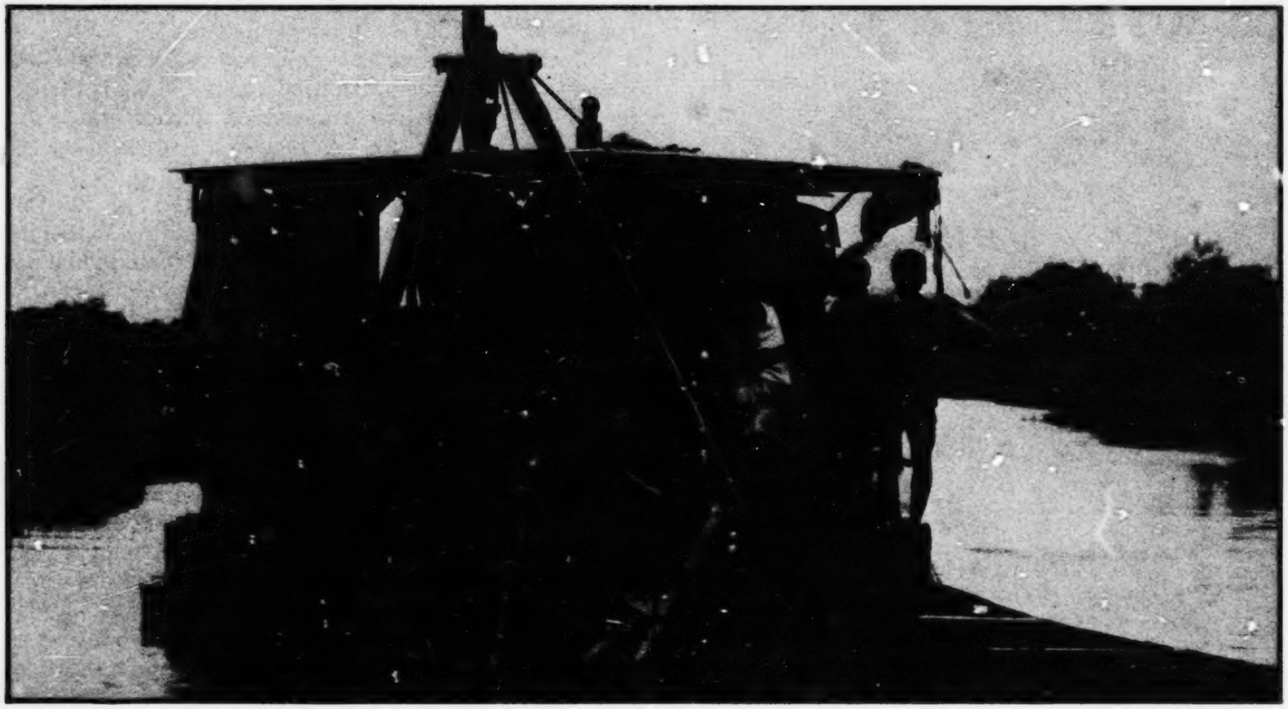
The reason for the crash program is that Nigeria faces a serious shortage of fish. Consumption has shot up in recent years, and several hundred thousand tons have had to be imported to keep up with demand. Fish now accounts for about one-third of the nation's animal protein consumption.

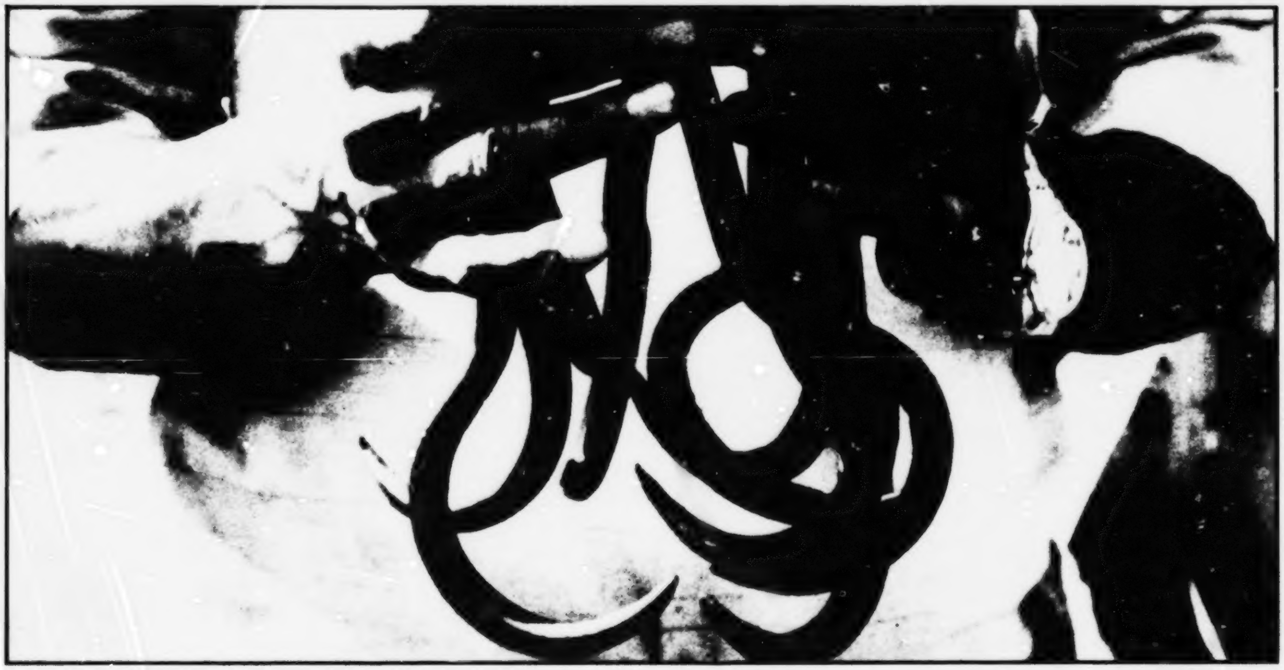
The phenomenal rise in fish consumption is the end result of sharp increases in the price of beef and poultry since the Sahelian drought of the 70s. The drought killed many livestock in northern Nigeria, the region that supplies the bulk of the country's animal protein.

Nigeria has about 496 miles of coastline, many rivers, lakes and lagoons, and also plans to utilize the vast freshwater reservoirs and canal systems created by irrigation dams. At present the main impact of the accelerated fish production program is being felt in nine of the 19 states. As the program spreads, the people behind it have no doubts that the combination of fish farming and modernized capture fisheries will make Nigeria self-sufficient in fish in the near future. ☐

Kobina Danson is with the International Development Research Center of Canada.

By dredging this waterway these Nigerian fishermen will soon have access to the ocean.





USE NO HOOKS

A new policy that may save millions.

by Alexanderina Shuler

Who would dream that small holes in fertilizer bags could cost as much as $5 million a year and make a difference whether a lot of people went to bed hungry or adequately fed?

The problem is real.

In Bangladesh, for example, fertilizer makes up a sizable portion of commodities shipped into the country—1 million tons a year from several international donors at the going rate of $255 per ton. U.S.-financed fertilizer shipments in recent years have ranged from 60,000 to 100,000 tons.

For as long as anyone can remember, stevedores in Bangladesh—and all over the world—have used hand hooks to unload ships. The problem with using them on fertilizer bags is that the hooks puncture the heavy-duty sacks. The hole usually closes up; undetected is the large hole in the inner plastic bag. By the time a bag leaves a ship, it is rolled, tumbled, jerked and otherwise moved innumerable times. As it continues on its long, rough journey from dock to rice paddy or wheat field, several pounds of fertilizer pellets, which have moved into the wall between the outer and inner bags, have dozens of chances to escape as the bags suffer tears, snags and stretched seams.

Also, moisture is absorbed, impairing the effectiveness—the chemical properties are adversely affected and the fertilizer clumps, which means it tends to spread unevenly when the farmer puts it on his field.

Whenever possible, spilled fertilizer is swept up and rebagged. Often, the spill goes undetected; only by getting down on one's knees can sprinklings be seen.

The "invisible" trickling of fertilizer could be seen as food that will never be grown. Exactly how much is lost? Weighing the bags when they arrive at port and then again at final destination would prove misleading. Lost fertilizer weight is replaced by the weight of moisture picked up along the way.

According to some estimates, if the fertilizer is not lost nor its effectiveness reduced—which happens to at least 2% of the total used in Bangladesh each year—40,000 tons or more of grain could be grown. Each year, as fertilizer shipments go up, so does the loss. Forty thousand tons of grain are enough to feed 200,000 people for a year. People are not starving because of the fertilizer problem, but it does mean the government has to import that much more food.

Two years ago marked the beginning of the end of the hook-in-bag problem. "We just couldn't ignore

the situation anymore," AID's Paul Maddy says. The clue to solving the problem was in getting the dock workers to put aside their hooks. Maddy, an agronomist and now logistics officer in Bangladesh, and his staff traveled about the country and to the ports, spreading an awareness of the magnitude of the preventable losses. One local member of the staff, Robert Gonsalves, "was especially valuable to our work," Maddy notes. "Bob knows people everywhere and is respected. That was critical to our getting our message across and having people accept the changes we proposed."

Full of energy and enthusiasm, Gonsalves commanded the attention of laborers and government officials when he approached them with, "Hooks are snatching food from the mouths of our children. Hooks can't produce more rice but fertilizer can."

"Workers need to understand what happens and why, if a problem is to be corrected," Maddy says, elaborating on the staff's effort.

"It's a matter of education. Order someone, 'don't use hooks!' and you may get some results, but they'll be temporary. As soon as the officials are out of sight the hooks will start swinging."

As they went about their work, Maddy says the staff became aware of several misconceptions people held. First, there was the idea that workers don't care and would not cooperate. Get tough instead! Furthermore, some people insisted hooks are necessary to provide rapid unloading. One suggestion frequently heard was a special bag, perhaps with handles at both ends.

In response to the AID mission, the union chief at Chittagong port said, "we like to express our heartfelt thanks to you and AID for your concern to the losses being sustained by the people of Bangladesh due to damage to the fertilizer. We are in agreement with any proposal that will help better operations in Chittagong port as well as safeguard the interest of the dock workers." He closed by offering full cooperation.

Once the workers were shown they could work without hooks and not get sores—which turned out to be a real concern among workers—they were cooperative. Labor agreed to rewrite contracts that would specify "no hooks" under any circumstances.

More hands are now needed to move the bags—three people now lift with both hands held flat under the bag—and this is an added expense. But the cost is far less than the loss, and less than the cost of devising a new bag.

In addition, Maddy says the rate of unloading actually has increased with more men working to load bags into larger nets or platform slings. Another misconception disproved.

The idea is not a flash in the pan. The Bangladesh government—aiming to meeting its goal of food self-sufficiency by 1984—is institutionalizing the changes. The fact that government, labor and contractors are discussing and negotiating the problem, not only at the docks but throughout the country as the bags of fertilizer proceed in the distribution chain, is good news. As Maddy notes, the problem can be solved, as crews in Chana and Chittagong, where vessels have discharged cargoes without using hooks, have shown. ☐

Alexanderina Shuler is editor of "Front Lines," AID's employee newspaper.

IN PRINT

Food for War—Food for Peace

United States Food Aid in a Global Context

by Mitchell B. Wallerstein

A review by
Kathleen Bitterman

Mr. Wallerstein has produced a comprehensive, useful survey of the evolution of bilateral and multilateral food aid through 1976. However, while the first part of the title—"Food for War"—is provocative; the discussion of this phase of the PL 480 program is comprised largely of cliches rather than critical analysis.

The organization of the book—the first and third sections deal with the evolution and foreign policy objectives of the U.S. food aid program, while the second and final parts are concerned with international food aid—is somewhat confusing and leads to repetition.

The availability of food for aid purposes stemmed from the U.S. farm legislation of the early 30's. During World War II and immediately thereafter, the United States supplied massive amounts of food aid through Lend Lease, the U.N. Relief and Rehabilitation Administration, other specialized legislation, and the Marshall Plan. Pressure to "dispose" of mounting surplus stocks resulting from high price supports and technological advances led to the enactment in 1954 of the Agricultural Trade Development and Assistance Act—PL 480. Its original intent was primarily to help U.S. farmers; benefits to recipients were of secondary importance. But the author misses another important aspect of the PL 480 program. The boost to U.S. shipping resulting from the requirement that at least half of the PL 480 cargo (as with all aid-financed cargo) be shipped on U.S. flag vessels is not mentioned.

It was not until the Kennedy-Johnson years that the orientation of the program shifted more toward using food to promote economic development in the Third World, albeit with an eye toward developing future cash markets. The 1966 revision of the PL 480 legislation provided *inter alia* that food could be produced for aid purposes. Wallerstein misses (or ignores) the point that at the time of export, the secretary of agriculture must determine that PL 480 shipments will not reduce amounts needed for domestic consumption, commercial exports and adequate carryover stocks. (There is now some leeway to use supplies for urgent humanitarian purposes.)

Food for War—Food for Peace: United States Food Aid in a Global Context, Mitchel B. Wallerstein, MIT Press, Cambridge, London, 1980. 312 pages. $30.

Wallerstein is extremely critical of the Nixon administration's decision to use a large share of PL 480, particularly in 1974, for Indochina—"Food for War!" However unpopular, the United States *was* heavily engaged in the war; to deprive the Vietnamese and Cambodians of food that they could no longer produce themselves would have caused even greater suffering, and complicated military operations. An important point: total tonnage made available for PL 480 in 1974 fell by more than 50% from the preceding year. To a large extent, this reflected the legislative limitation mentioned earlier. For example, data cited by Wallerstein indicate that by the end of 1973, carryover stocks of wheat—the mainstay of PL 480—had fallen by more than 40% from 1972. In theory, commercial exports might have been curtailed (this would have caused an uproar!); in fact, there was little alternative under the law to reducing food aid. Opponents of the war were enraged by the size of the Indochina allocations. Congress subsequently took a side-swipe at PL 480 by prohibiting shipments to Vietnam, limiting concessional sales of food to higher-income countries, and establishing minimum allocations for the donation program.

Since the early days of PL 480, the

United States has used food aid, either by itself or in combination with other resources, to further U.S. foreign policy objectives, including national security interests. Several examples are cited, ranging from aid to Yugoslavia during the height of the Cold War; to Egypt, both during the Nasser regime and later in the course of shuttle diplomacy; to India—huge grain shipments that saved that country from famine in the mid-60s. Led by President Johnson, the United States exerted considerable pressure on the Indian government to focus on expanding its own agricultural production including increasing production and imports of fertilizer. Wallerstein's account of the suspension of U.S. grain shipments to Bangladesh until jute that Bangladesh had sold to Cuba was finally shipped, is essentially correct. There is an implication, however, that U.S. officials could have chosen otherwise; the fact that they were bound by the law does not come through.

Wallerstein is ambivalent on using food aid as an instrument of foreign policy. He argues that the availability of food aid resources has played a pivotal role in attaining specific policy objectives that could not have been accomplished otherwise. But like so many others, he apparently is influenced by the mystique of food aid—somehow or other it should be divorced from political concerns so long as widespread hunger exists. It should be remembered that the United States has, in fact, responded promptly to disaster needs—in the Sahel, Nigeria, Bangladesh during its struggle with Pakistan, in post-war Cambodia, and in many other areas of the world. But food aid is a finite resource: even if it were targeted only to the most serious hunger problems, it could make little impact.

The concept of multilateral food aid began in 1943 with the establishment of the Food and Agriculture Organization (in fact, only indirectly concerned with food aid per se) and the U.N. Relief and Rehabilitation Administration (UNRRA). The United States was a major contributor to UNRRA; for various reasons, that ended in 1947. It was not until 1960 that this country, motivated in part by the desire for burden-sharing, made a proposal in the U.N. General Assembly that ultimately led to the establishment of the World Food Program (WFP). It began in 1962 as a three-year experiment (since continued) with a goal of $100 million. The U.S. supplied over half of that amount. Pledges, expressed in dollars, totaled $674 million by 1975-76.

As Wallerstein explains, except for a relatively small amount of disaster aid, WFP's operations are project-oriented (that is, direct distribution of food through school feeding, mother-child nutrition schemes and food-for-work). According to the rules, food is turned over to recipient governments which must manage the projects and finance the substantial related internal costs—transportation, distribution, for example. WFP's operations and problems are examined at somewhat excessive length.

During the Kennedy Round of the General Agreement on Tariffs and Trade, the United States demanded wider food aid burden-sharing as a price of its participation in the Wheat Trade Convention and concessions on industrial products. European countries, including the European Economic Community and Japan, reluctantly agreed; the result was the Food Aid Convention (FAC) of 1967. This provided for a relatively modest amount of cereals (or the agreed cash equivalent) of 4.3 million tons annually of which the United States committed 1.9 million tons. In 1980 the FAC commitment was finally increased to 7.6 million tons—still well short of the 10-million tons recommended by the 1974 World Food Conference. The U.S. pledge is now 4.5 million tons.

The summaries of other countries' bilateral and multilateral food aid programs are well done. Except for Japan, other nations provide food aid on a grant basis; some countries tend to concentrate bilateral aid—France to its former colonies; Australia to nearby countries; and Canada to Asia. The food aid program of the nine-member European Economic Community is both bilateral and multilateral.

The pros and cons of multilateral and bilateral food aid are discussed at some length. Wallerstein concludes that donors will continue to give at least lukewarm support to WFP but it is extremely unlikely that they will forego the foreign policy benefits of bilateral aid. He does not foresee any major restructuring or expansion of the World Food Program—his thesis is borne out by the fact that for 1981-82, WFP fell short of achieving its $1 billion target. The expectation that donors are more likely to increase their commitments through the Food Aid Convention, which may be fulfilled by extending bilateral food aid, is also on the mark. As noted above, in 1980 FAC commitments increased substantially.

In considering the goal of world food security Wallerstein concludes that more harm than good would come from trying to force changes in donor food policy. He believes that "mutually coordinated bilateralism" as exemplified by the FAC will facilitate provision of food aid on a more regular, longer-term basis. He asserts, but does not explain, that greater reliance on FAC coordination (which in fact is more of a statistical exercise than otherwise) will prevent conscious mislabeling of food aid—presumably, reducing the amount provided for political purposes. Short term, ad hoc responses to food deficits will not suffice—to achieve real progress, donors must realize the interconnectedness of their food aid and other aspects of their foreign policies. □

Kathleen Bittermann, now retired, formerly was the director of AID's Food for Peace program.

WHAT THE MEDIA SAY...

The three latest French foreign policy initiatives confirm that France will be more sympathetically involved in the Third World under socialist President Mitterand than it was under his predecessor. This, in turn, increases the potential for strain or irritation in French-American relations. The three initiatives involve El Salvador, southern Africa and the Middle East.

—Christian Science Monitor

Pinched for money and struggling to develop a vastly unmodernized country, Ethiopia's radical military government has begun making overtures to the West in a search for economic aid.

Though Ethiopia is the Soviet Union's most strategically placed African ally, the Russians so far have furnished the country with little other than massive amounts of military aid.

—Baltimore Sun

A lifeline of ships streamed out of United States ports last year with more than half of the grain in international trade, carrying wheat to the Soviet Union and China, animal feed to South Korea and corn to Mexico.

More than ever before, the world depends upon American exports for its basic food needs. This country now exports more grain than Latin America and sub-Saharan Africa together produce.

In the last 10 years, American farm exports have almost tripled in volume, surging 25% in the last two years alone.

—Ann Crittenden
New York Times

A hungry man is an angry man. The late Bob Marley sang those words with a reggae beat to hundreds of thousands in tiny, poor Caribbean countries. The words carry a note of truth. In search for answers to poverty, one is apt to try anything that seems promising: communism, socialism, democracy. Whatever.

United States intentions of fostering stability and democracy in the Caribbean should take cognizance of this tenet.

—Miami Herald

Over the weekend the Reagan administration shifted U.S. policy with respect to southern Africa into neutral. In a lengthy statement, reportedly approved at the highest levels of the government, Chester A. Crocker, assistant secretary of state for African affairs, said the administration will not take sides in disputes between South Africa and black African nations so that it can be in a better position to negotiate between the parties and protect U.S. economic interests in sub-Saharan Africa.

The new African policy, as laid out by Mr. Crocker, was balanced, elaborately reasoned and terribly shortsighted.

—Philadelphia Inquirer

Consider Zaire, a country the size of the United States east of the Mississippi.

It has 26 million people. Three-quarters of them subsist on an annual income of less than $100. Two-thirds of them are illiterate. Its President, Mobutu Sese Seko, who has ruled the country for 16 years, is a millionaire many times over.

Yet, Zaire is loved by the West.

The reason: raw materials. Zaire is rich in them. It has, for example, the world's largest known reserves of cobalt (about 30% of the world's total): as well as huge quantities of other resources essential to industry and defense, including zinc, manganese and copper. Zaire is also the world's largest producer of industrial diamonds.

—Christian Science Monitor

In response to the government of Egypt's policy to expand the role of the private sector in Egypt's economic development, the United States' position has been to fund specific programs to assist Egypt in (its) efforts.

The Egyptian economy is very much an economy in transition. The resulting changes in the economy are part of a broader political evolution away from a posture combining intense inward nationalism and considerable interdependence with the Soviet Bloc toward that of a more international outlook and a deliberate move toward closer political and economic relationships with the Western nations.

—David Detloff
Fond du Lac (WI) Reporter

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agency for international development

NOVEMBER 1981

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LESSONS LEARNED: 20 Years of AID

UNITED STATES OF AMERICA

DEVELOPMENT UPDATE

Munching on microbes: Microbes, those tiny one-celled organisms that are invisible to the naked eye, may well play a major role in feeding the world's growing masses. In fact, many people already eat the protein-rich microbes regularly—in yeast bread, cheese and other dairy foods, for example. It's only a beginning, scientists are saying. Some day protein derived from microbes could be mass-produced to meet all dietary needs. A single-cell protein (SCP) can be made in almost any form, from a simple colorless powder to sprinkle on food to nutritious "candy" bars or "meat" patties. But don't look for these products in the stores just yet. There are still considerable problems.

Although microbes feed on almost any hydrocarbon source, from sugar to petroleum, and multiply with amazing speed, they sometimes create so much heat in the process that they self-destruct. According to an article in "Bioscience," raw SCP is very high in nucleic acids, which among other things, can cause gout. It doesn't taste good. And it's hard to digest.

Nevertheless, many scientists believe these problems are surmountable, that production costs—now high—can be brought down to a reasonable level and that one day we'll all be munching on microbes.

Why don't more third world farmers take suggestions and recommendations of researchers and extension workers, wondered Donald Winkelmann and Edgardo Moscardi of the International Maize and Wheat Improvement Center in Mexico City.

Some experts, they found, claim farmers are at fault, arguing that preferences based on tradition lead farmers to reject unfamiliar methods. Some point to extension services, arguing that improved technologies have not been demonstrated to farmers. Still others claim that inadequate credit limits farmers' ability to adopt improved technologies. Some emphasize that inputs, such as fertilizer, are just not available, especially at affordable prices.

But, the two economists discovered, even the poorest farmers—supposedly the most tradition-bound and the ones with least access to inputs, information and markets—do take up certain new technologies while rejecting others. It seems it's a matter of finding out what the farmers' needs and means are and meeting them. It's called appropriate technology.

Development, a long hard road: "I was part of a rural health program in West Africa," recalls an ex-Peace Corps volunteer. "We were received very warmly into the villages and the women seemed to listen very attentively as we tried to explain the importance of sanitation and nutrition. We noticed that the village children were eating dirt and of course we urged the women to make them stop and explained why. They nodded and said 'yes, yes,' but the children kept at it. Africans are very polite people and they don't like to tell you something they know you don't want to hear. But finally one of the women spoke up. 'We can't tell the children to stop eating dirt,' she said. 'That's what makes their bones grow strong.' And suddenly I realized what a big job lay ahead."

BEST DOCUMENT AVAILABLE

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Cover: Twenty years have passed since AID was created by Executive Order, following the passage of the Foreign Assistance Act of 1961. The science—and art—of economic assistance has changed considerably in that time. See article on page 2.

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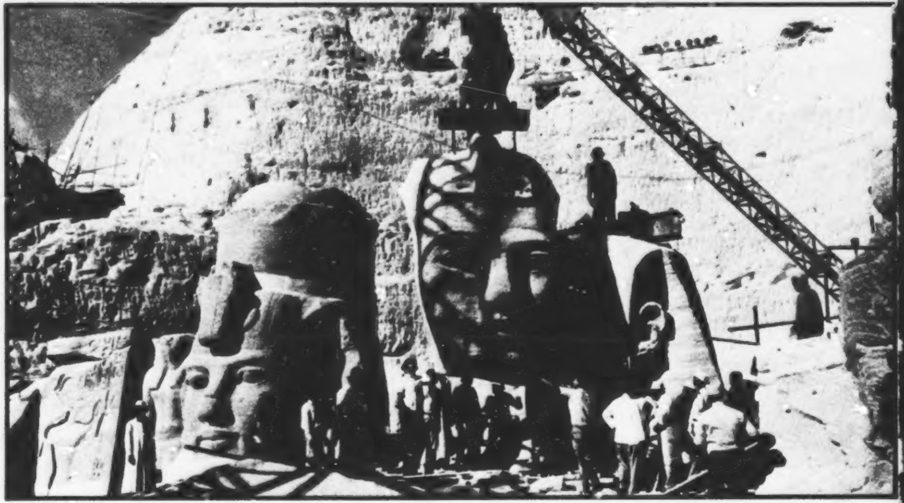


LESSONS LEARNED: 20 Years of AID

Development is not a neat, straight thread.

by James Bednar and Maxine Stough

Twenty years have passed since Sept. 4, 1961, when President John F. Kennedy signed into law the Foreign Assistance Act of 1961 which led to the creation of the Agency for International Development by executive order in November. During this time, AID has not only contributed to the welfare of developing countries, but also to the welfare and national security of the United States and the world.

In these 20 years, AID has provided development assistance to some 100 countries at an approximate cost of $54 billion, of which $22 billion has been in the form of loans.

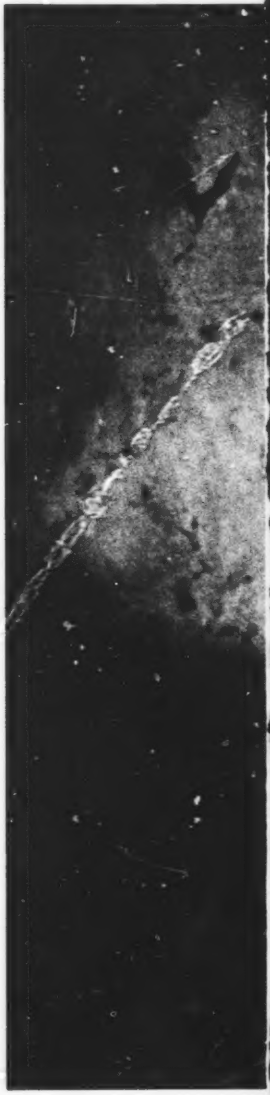
It has been said that knowledge of the past prepares us for the challenge of the future. One lesson learned over the years is that development takes time. No matter what the approach, it is complex and lengthy.

From 1961 to 1973, AID concentrated largely on capital projects such as dams, railroads and highways in the belief that they would ignite an "economic take-off" in the developing countries. This would create jobs, food, education and higher income for the poorest people in those countries.

While results fell short of hopes, creation of infrastructure contributed notable achievements. Average Third World life expectancy increased from 35 to 50 years—the level attained in Western Europe at the beginning of the 20th century. The percentage of adults in low-income countries who can read and write rose from 10% to 23% between 1960 and 1974.

Some developing countries achieved such great economic growth that they no longer need U.S. assistance. Subsequently, they established new economic relationships with the United States based on trade and private investment. Taiwan and South Korea are two obvious examples.

Korea's evolution from economic stagnation 28 years ago to profitable trading partnerships today can in large measure be attributed to the U.S. foreign assistance program.



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AID support has taken many forms over the years, from helping in the relocation of the monuments of Nubia to make way for the Aswan Dam, to funding health care programs.

An Indian farmer may have a better harvest this year, thanks to AID-funded research. But improved crop yields are only part of the challenge. In many countries, roads are needed if crops are to be marketed.

AID helped build schools and set up training in a host of vocational and technical areas, at the same time supporting every phase of the nation's economic activity.

Today visitors see industry on a grand scale and the signs of a rapidly rising standard of living. The bustling people are well-fed, well-clothed and well-educated. The indications of growing prosperity are everywhere.

In 1962, per capita GNP (gross national product) was $87. By the end of 1980, it had jumped past $1,500. In a single generation, South Korea has become a major U.S. trading partner. Our exports to that nation reached nearly $5 billion in 1980 and are expected to climb past $5.5 billion in 1981. Bilateral trade exceeding $10 billion is predicted for 1981. Nine South Korean firms are listed as Fortune 500 companies.

Over 16 years, beginning in 1949, the United States provided almost $500 million in development assistance to Taiwan. We financed a hydro- and thermo-based energy system that fueled the massive industrialization that subsequently took place. We helped enlarge harbors and lent a hand in rehabilitating and expanding railways and roads.

Our aid to agriculture helped Taiwan double output in 14 years and achieve food self-sufficiency. The policies we encouraged led to an emergence and dominance of private enterprise in industry.

But, encouraging as these gains are, they mask the fact that in most developing countries the benefits of economic progress have not reached the vast majority as rapidly as might be desirable. And in many cases, population growth has outstripped economic gains.

So, by the early 1970s, development strategists were beginning to conclude that the world's poorest people generally were being left behind. "New Directions" was Congress' response, and it was echoed around the world. This led donor

In the early days of AID, massive projects were the rule. Today, the emphasis has shifted to meeting basic human needs in, for example, food, water and health.

and developing countries alike to redesign development programs in 1973 in an effort to raise the productivity and incomes of the poor and to lead to the ultimate self-sufficiency of Third World countries.

The strategy became known as the "basic human needs" approach, aimed at achieving equitable income growth. Because it has been in use a relatively short period of time, the results are still to be measured.

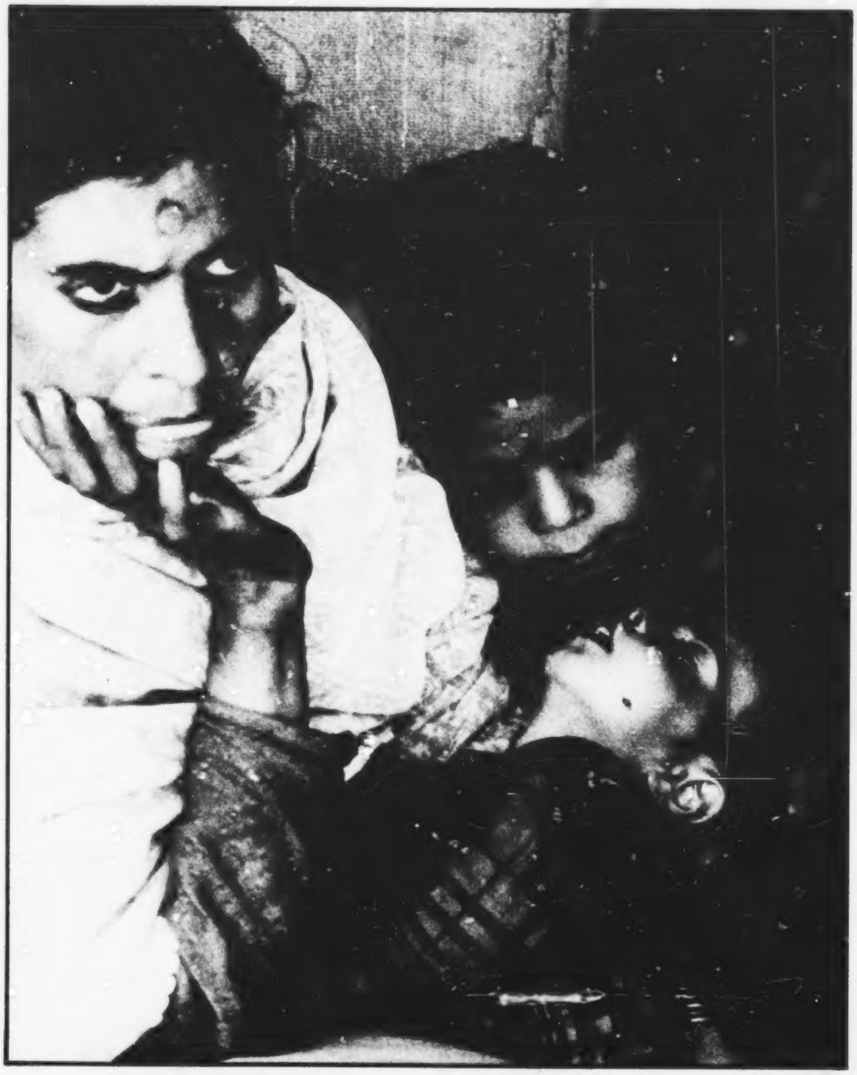
Its essential elements include a combination of increased provision to the poor of such productive resources as land, water, fertilizer, seeds, tools and credit. It stresses increased investment and production in activities that employ unskilled labor. And it expands services of health, nutrition, family planning and education that over time improve the productive capacity and employment potential of the poor.

The Reagan Administration is concentrating the program on encouraging improved economic policies in recipient countries, institution building, technology transfer and increased involvement of the private sector. Improved economic analysis also will enhance the effectiveness of our assistance programs.

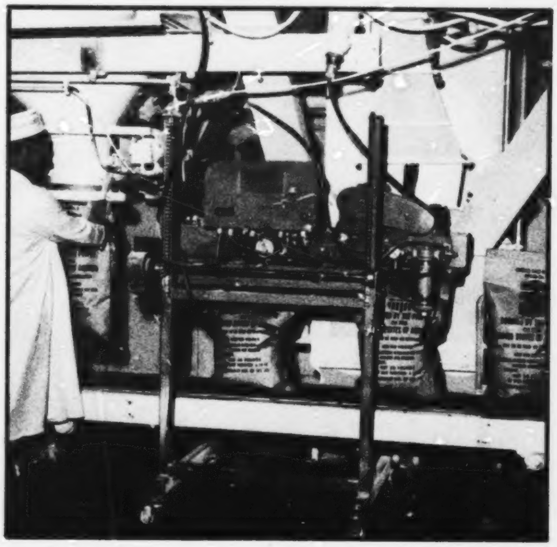
Through institution building and technology transfer, the developing countries eventually will assure that development programs do not underwrite stagnation. Encouraging private sector involvement will enhance productivity and growth in the developing countries. These administrative emphases will be applied within each of the sectors to which U.S. assistance is directed—to agriculture, health, population, energy and education.

Much remains to be done. Development is not a neat, straight thread. It is a bundle of strands that must be sorted out, then plaited. It takes time. □

James Bednar and Maxine Stough are writers on the staff of AID's Office of Public Affairs.



Mothers and children throughout the Third World need health care and nutrition training.



Bags of grain destined for poor countries are filled in a U.S. plant.

SILENT AMBASSADOR

Probably the best known U.S. emblem throughout the world—other than the American flag or Coca-Cola—is AID's handclasp. It has become a symbol of the United States' concern and long history of aiding those in need. The red, white and blue shield is a required label for U.S. goods sent overseas under American assistance programs, and it can be found in the remotest corners of the globe.

Labeling was first required during the Marshall Plan days, when Congress became concerned that the Russians were taking credit for poorly marked U.S. foreign aid donations to European countries. The original 1948 design was adapted from the Great Seal of the United States with the words "For European Recovery Supplied by the United States of America" in the center, translated into the languages of the recipient countries.

But the slogan became obsolete when military aid was added to the economic program and when some Near East and Asian countries were added to the roster of recipients under President Truman's Point IV program. In January 1951, the slogan became "Strength for the Free World from the United States of America."

Even with this change some difficulties occurred. In several Asian countries, the slogan could not be translated into the local dialects, and different designs and slogans had to be used. Moreover, the wide variety of containers needing labels—paper, fabric, bags, tin, wood and metal boxes—made it necessary to have almost as wide a range of labels, decals, metal plates, tags and stencils in stock, in all sizes. The lack of uniformity created increasing problems for U.S. emblem suppliers. Since each shipment carried the slogan in the language of the recipient country, the value of the labeling was lost when the goods were reshipped, trans-shipped or diverted through other countries. The complications, costs and delays soon made it clear that a more uniform emblem was needed.

So, in 1953, Eleanor Gault, an employee in the Marking and Labeling Office of the Mutual Security Agency—an AID predecessor—was assigned to revise the emblem. Gault created the handclasp still in use today.

During her research, Gault discovered that clasped hands have been recognized as a sign of unity, good will and cooperation for centuries. They were familiar as a sign of union in the mythology and religious rites of Asia Minor.

The handclasp was part of ancient Hindu marriage ceremonies and that of the Romans, passing on into Christian ceremonies. Clasped hands were used on Roman coins in the first century and on 18th century African coins. They appear on many memorials including a battlefield monument at Pea Ridge, AR, honoring men of the North and South who fell during the Civil War. They appear on the state flag and seal of Kentucky. Gault concluded that the clasped hands "could serve to identify the aid that is part of the mutual effort with mutual benefits shared by our country and our friends around the world."

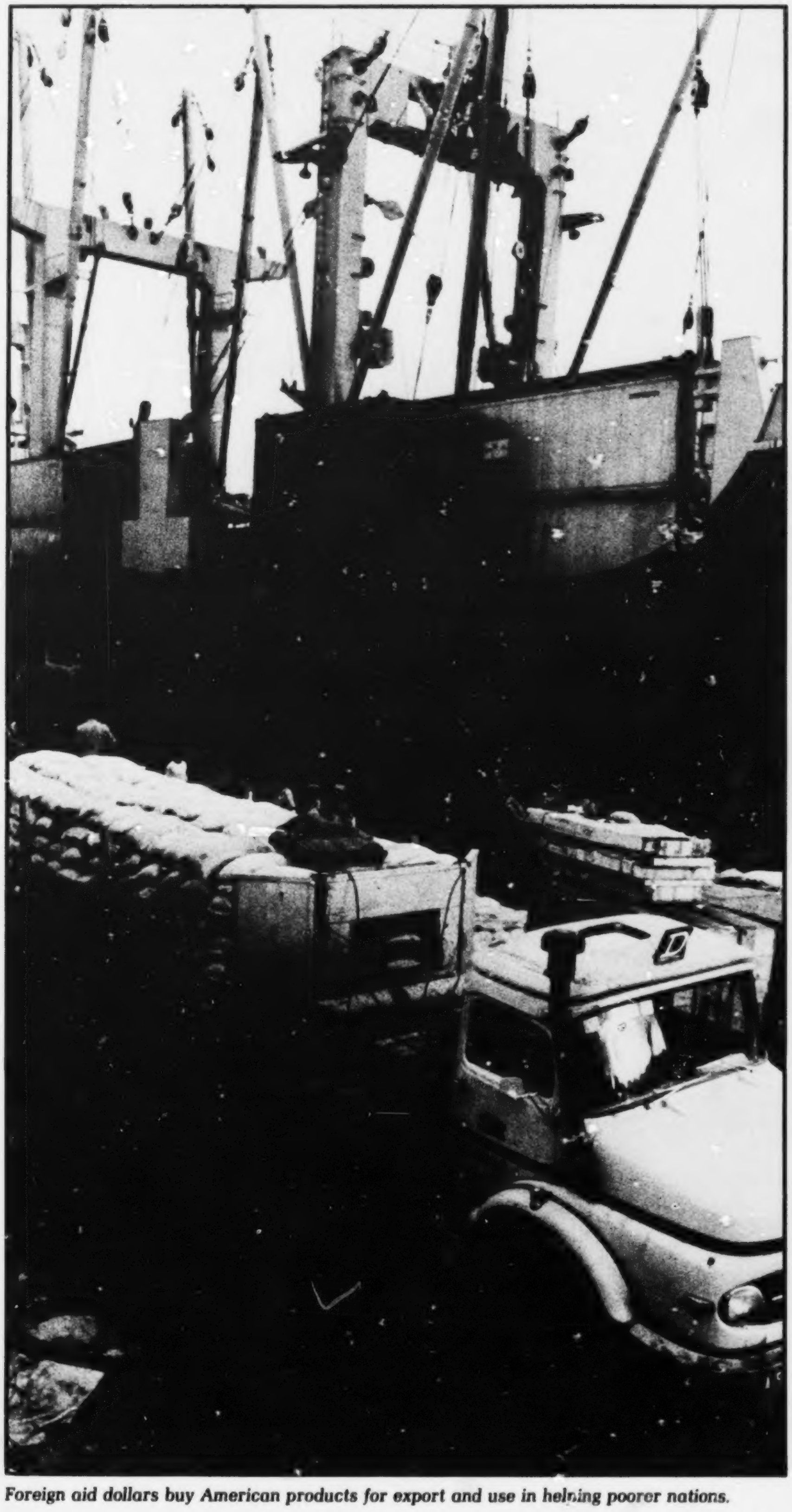
The red, white and blue colors represent the United States, with the 13 stripes at the bottom depicting the original colonies. The four stars at the top allude to the stars of the American flag. The words, "United States of America" beneath the hands further identify the goods' origin.

"The hands represent two human beings rather than two kinds of people," Gault said. "Therefore as symbols of mankind, rather than a definition of what they represent, their colors should be insignificant."

As the accompanying photos show, the emblem is prominently displayed on all containers and bags of AID-funded goods. After the containers are empty, the local people reuse them for any number of household tasks—carrying water from the well, or fruit to market. And the bags become shirts or skirts.

A symbol of American goodwill recognized from Nepal to Peru. ☐

—James Bednar



Foreign aid dollars buy American products for export and use in helping poorer nations.

Foreign aid is a popular whipping boy, especially during times of fiscal austerity.

At such times, citizens, public administrators and legislators often ask why "we" are wasting all that money overseas when we have problems at home that need attention.

Similar questions, even criticisms, were voiced about the space program. "Why are we wasting all that money on *space*?" as if we simply bundled up billions of dollar bills, placed them in rockets and fired them into outer space!

There seems to be a similar misconception about foreign aid, that we simply package up bundles of dollar bills and export them to foreign countries.

Land-grant universities that are experiencing growing international dimensions, sometimes face these kinds of questions, too. To help answer them, one such institution, Washington State University, put together the following case history from records in its controller's office, and of the firms with which it contracted.

On June 14, 1979, a white George S. Bush Co. truck pulled up to VWR Scientific in Seattle and loaded 14 cartons of scientific instruments which were delivered to Seattle-Tacoma International Airport.

The shipment left Sea-Tac on June 27 in the belly of Pan American Flight 122, a Boeing 747, destined for London's Heathrow International Airport to make connections for eventual delivery on July 17 to the University of Jordan in Amman.

The transaction was one of the final details of completing a four year contract to help the University of Jordan establish a college of agriculture.

It is but one small example of how U.S. Agency for International Development contracts benefit local, state and national economies, as well as the Third World nations.

This one contract involved $21,224.74 of business within Washington state—$19,944.70 to VWR for the instruments and $1,280.04 to Bush, of which Bush paid $1,164.32 to Pan Am for freight and $62.94 to Royal Globe Insurance Cos., a Seattle firm, for insurance. The remaining $42.78 Bush kept for local cartage, documentation and forwarding fees.

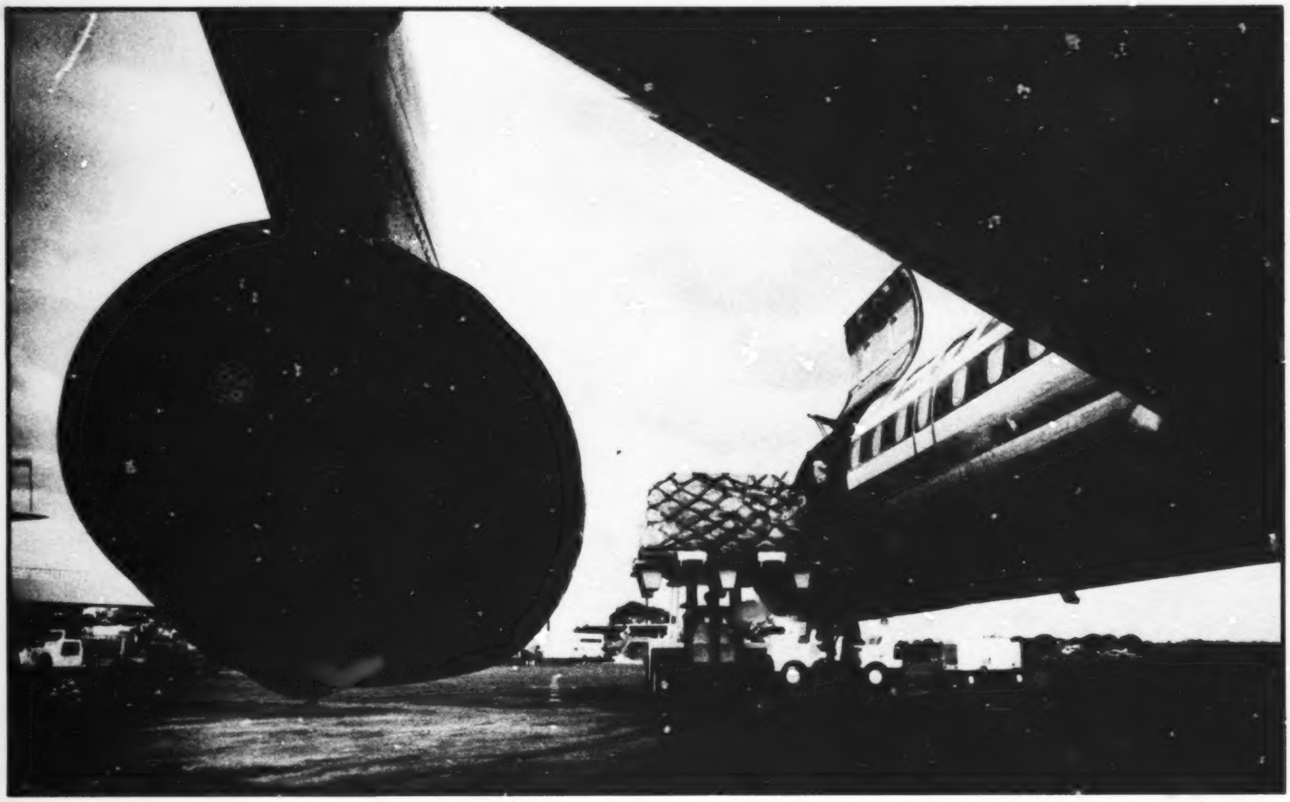
The entire sum came from AID and was part of several million dollars worth of non-agricultural goods and services bought in Washington state each year for shipment overseas as part of AID's economic development programs.

For the fiscal year ending Sept. 30, 1979, AID records show that Washington state sold more than $34 million worth of goods, services and agricultural products as a direct

by Terence L. Day

FOREIGN AID NO BUNDLE OF CASH

Contrary to popular opinion, many dollars are spent right here, says one state university.



American-made goods are loaded on a U.S. carrier for transport overseas.

result of foreign aid programs and that an additional $5.5 million worth of technical service contracts were in effect with universities and individual experts for research or supervision of AID field projects.

Of that, more than $30 million was paid to the state's farmers and food processors for grain and other agricultural commodities sent to developing countries under the Food for Peace Program.

More than $4 million was paid to Washington manufacturers and other firms for goods and services used in overseas economic development programs administered by AID.

Sharing the business were 23 Washington firms that sold goods and 10 businesses, institutions and individuals that sold services. Nearly all of the money went to companies and institutions in the highly urbanized Puget Sound Region.

John S. Robins, dean of the WSU College of Agriculture, says the university has been involved in international programs for nearly 30 years. That involvement has been increasing since the early 1970s, when it finished a project to help develop a university in Faisalabad (formerly Lahor), Pakistan. Since then it has been involved in a similar project in Jordan, and in others in Indonesia, Lesotho and Sudan.

Development contracts held by WSU total $36 million over a period of several years. Robins says WSU doesn't spend any state funds on the projects, and that wherever possible, all goods purchased for them are bought from Washington businesses. Federal law requires all purchases be from United States firms if they sell the items, and that transportation be on American carriers as far as possible.

Besides the economic stimulus that these development programs create in our own economy, Robins cites a vital national interest.

"A half billion people are affected by the nutrition gap. Half to two-thirds of the children in developing countries are undernourished. The United Nations estimates that 12 million children under the age of five died of malnutrition last year. It would take 88 million tons of grain a year to fill the gap between food production and minimum nutritional needs in food-deficit countries.

"But developing nations import only about 44 million tons of grain, which leaves them still 44 million tons short of what they absolutely need. And the situation is getting worse," Robins says. "The projected shortfall in 1990 is between 132 million tons and 160 million tons.

"To put this in perspective, consider that Washington state produces only 3.5 million tons of wheat each year on its vast, rich wheatlands, and the entire United States produces only about 63 million tons.

"The humanitarian aspects of helping solve world food and economic problems are obvious and compelling. But less obvious is the fact that we must help these people for our own protection."

Americans cannot divorce the future of less-developed countries from the future of America, according to the dean. First, we have an economic self-interest. Some 1.2 million American jobs depend on exports to the Third World. Last year American farmers exported a fourth of all that they produced—commodities valued at $41 billion.

Indirectly that permits Americans to buy foreign-made consumer goods, including vehicles, television sets, radios and clothing, all of which contribute to the American way of life.

And, Robins points out, exports are especially important to Washington state's economy although the average citizen may not realize it. Even farmers, whose livelihoods depend on exports, sometimes fail to make the connection between improved economies abroad and increased sales of our agricultural products.

American products appear on grocery shelves in Taiwan.

An Esso tank truck on a delivery run

Washington farmers export virtually all of their lentils, 90% of their dry peas, 80 to 85% of their wheat and substantial amounts of other crops such as apples, flower bulbs and hay. In addition, Washington seaports regularly ship grain from Montana and the Dakotas.

"The ability of the United States, and of the state of Washington, to sell agricultural and other products on the world market is partly dependent upon the developing countries having the economic ability to purchase U.S. exports, and to have advanced sufficiently to have developed a demand for them," Robins says.

Since territorial days, Washington's farmers have depended on export markets as a "home" for much that they produce, but during the past 20 years the export market has soared. Exports of wheat to Asia have tripled. Taiwan's imports of wheat from the U.S. Northwest are up 228%. Hong Kong once bought less than 2% of its wheat from the United States. Today it buys 74% from us. Korea, which buys all of its wheat from the United States, has increased per capita consumption from 14 pounds in 1959 to 100 pounds today. Indonesia, which imported 42,900 tons of American wheat in the early 1960s, now imports more than 600,000 tons.

Tanzanian students learn to operate a Masey Ferguson tractor.

"But," Robins says, "stimulation of our exports ultimately may prove to be one of the smaller benefits from America's commitment to developing nations. We saw what happened in Africa's Sahel in the early 1970s when drought devastated millions of acres of rangeland and millions of people were caught up in famine. Thousands died, we know that, but not many people realize that another significant consequence was that every single nation in the drought region changed governments as a direct or indirect result of that disaster.

"Most changed from generally democratic forms of government to generally totalitarian forms. The long-term implication of malnutrition is discontent, and from discontent flow things not good for humankind."

Robins warns: "We may be approaching a time when the Sahelian problem of the 1970s may be dwarfed by even larger problems in Africa. Climatic trends, if they continue, could result in a repeat of the Sahel—perhaps over a much larger area."

The importance to the United States of the type of government in developing countries should be obvious in the wake of the dramatically rising prices demanded by OPEC nations for the fuel that provides the foundation of our technological society. Indonesia, which WSU will serve on a five-year development contract, supplies 15 to 20% of the oil imported by the United States.

"Our industrial society is dependent on other countries—many of them lesser-developed countries—for raw materials that are essential to our economy," Robins notes.

"To put it bluntly, we need the Third World as much as it needs us." ☐

Terence L. Day is an agricultural research writer with WSU's College of Agriculture.

UNIVERSITIES GO INTERNATIONAL

Ironically, Washington state's land-grant university in Pullman, near the Idaho border, is better known in many circles in the Middle East, Africa and Indonesia than it is to some people who live in Seattle. That may be because WSU—and other universities like it—have a large and growing international dimension.

Records of only those who have expressed an interest in foreign assignments indicate that WSU's faculty members have worked in at least 100 of the world's 165 nations. The university has about 850 foreign students and holds two AID contracts for work in Indonesia and Lesotho, is the lead university in the Consortium for International Development—an association of 11 Western U.S. colleges and universities—on a project in the Sudan, and recently participated in planning a potential AID project in Jordan.

The university's direct involvement in international work began in 1954 with a series of AID contracts for work in Pakistan.

Under subsequent contracts that extended the program into 1972, university staff helped improve the curriculum, library and equipment base at the University of Punjab and to develop the West Pakistan Agricultural University at Lyallpur.

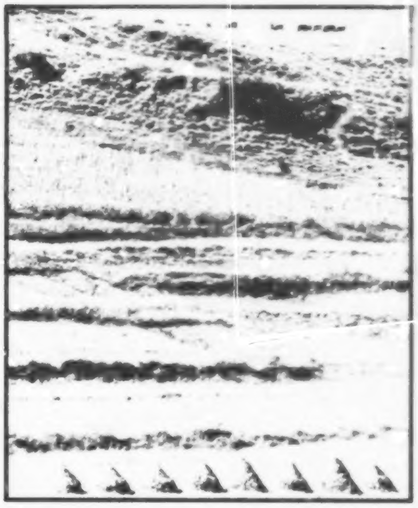
WSU sent 38 advisers to Pakistan for terms ranging from seven months to more than seven years. Eighty-one Pakistani students came to the United States for various terms of training, 55 of whom received degrees. Forty-six received master's degrees and 16, doctorates. One who studied at WSU is now president of the Pakistan Agricultural University.

With the help of the WSU development program, the West Pakistan Agricultural University increased the number of its faculty members from 59 in 1961 to 298 in 1968, and the number of doctorate holders from four in 1961 to 55 in 1968.

The institution's library was ex-

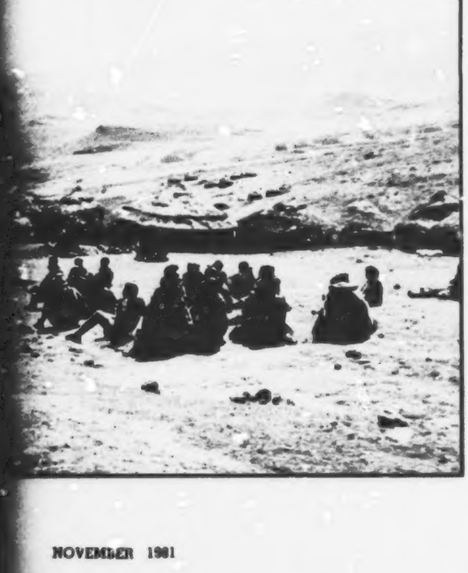
Lesotho villagers build a "krall" to hold oxen for research.

Most of the grain grown in Africa is harvested by hand.



When men travel far to find work, women must take over at home.

In the village of Rafalestane, villagers meet with a university team.



panded from 23,000 volumes of books and journals to 57,000. Degrees granted by the university also rose dramatically. In 1962 it granted 149 bachelor's and 23 master's degrees and no doctorates. In 1968 the number was up to 195 bachelor's, and 161 master's degrees and three doctorates. Similarly, the number of scientific research projects by faculty and graduate students was greatly increased, from 132 in 1961-62 to 701 in 1967-68.

WSU now has a team of eight people working in Maseru, the capital of the mountainous southern African kingdom of Lesotho.

In fulfillment of an $8.5 million AID contract, they are researching farming systems in Lesotho in an attempt to make farming there more profitable. Through increases in what people earn, it is hoped that the quality of rural life will be improved.

Lesotho is an "island" nation surrounded by the Republic of South Africa. It is about a sixth the size of Washington state. Its rugged landscape varies from 5,000 feet to 10,000 feet in elevation.

Much of the farming is done by women while their husbands work in South Africa's mines. (There they can earn as much in two weeks as in a year on their farms.) Twenty-three percent of Lesotho's chiefs are women. Although many of the women are skilled farmers, they lack time after caring for their families, operating businesses and participating in village government to make their farms as productive as they could be.

Last October, the university also signed a six-year contract to direct a $20 million program to establish an agricultural research program in the four western provinces of Sudan, Africa's largest nation. It is funded by AID, through a contract with the Consortium for International Development.

Other universities are participating in the contract, under WSU's leadership. The program is designed to improve food production systems, rehabilitate and conserve national resources and improve living conditions.

In November 1979, WSU signed a $7.5 million, five-year contract with AID to provide educational assistance to Indonesia.

This project eventually will involve an estimated 20 faculty members and graduate students from WSU and other institutions. About 40 Indonesian faculty members and at least as many students will be brought to the United States to study agriculture, education and extension services.

Indonesia is the world's fifth largest nation, with 140 million people who live on more than 13,000 islands. It is a nation rich in resources but suffering from rampant poverty in remote regions.

The team will be working with eight Indonesian universities located in the nation's six eastern provinces. The major objective is to improve agriculture and the living conditions of the rural poor through strengthened formal and non-formal education. ☐

—Terence L. Day

BEST DOCUMENT AVAILABLE

We, in Kenya, have come to regard population planning and development planning as one and the same exercise. . . . They are inseparable.

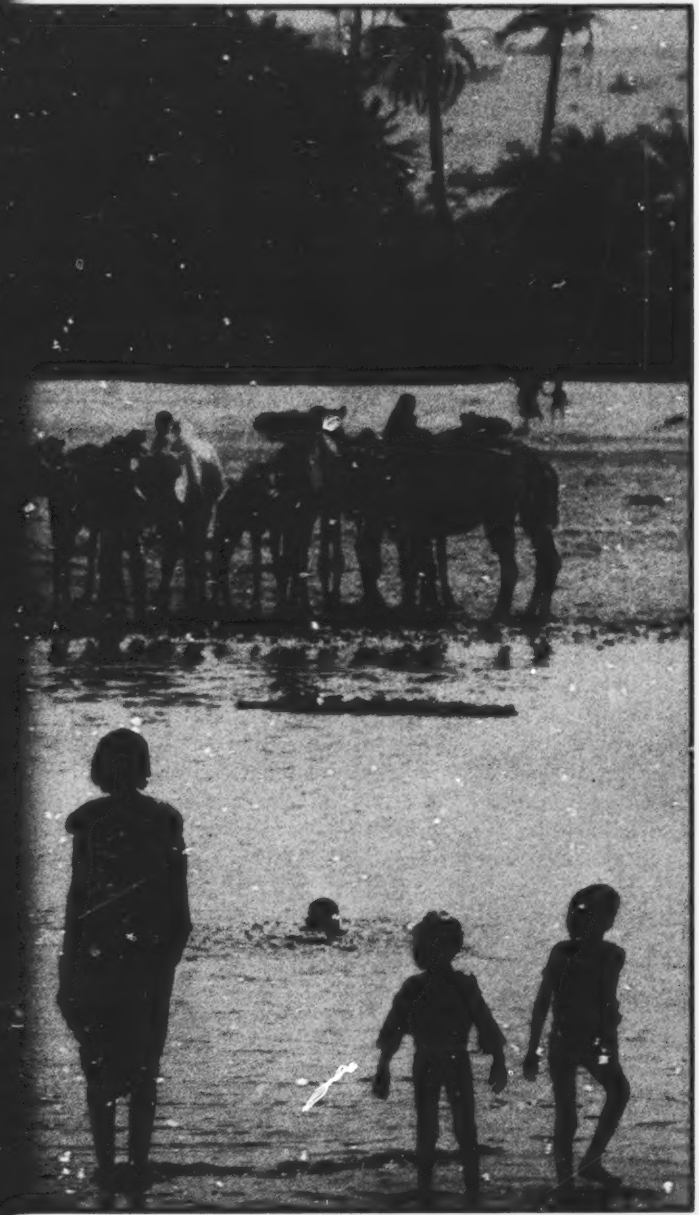
As you read development plans produced by African countries, you cannot fail to notice that many of them treat family planning as a small footnote to development planning. It is something mentioned in passing. If we recognize family planning as being central to development, we shall not waste time with debates about incentives and other peripheral matters. We shall see our job in promoting family planning precisely in the same role as our job in promoting education, health, better utilization of land, upgrading our livestock, the development of industry, and all other features of development planning on which we place primary emphasis. Family planning must be treated as the most critical aspect of any kind of planning. It is part of what one might regard as rational behavior on the part of an intelligent human being.

Just as no one should allow his land to be eroded by rainfall because later he will suffer, just as no one wants to leave his own child ignorant because that would deny him a good future, then every rational citizen must want to have the size of his family reach a

FAMILY PLANNING: Footnote or Theme?

It is critical to development says one African leader.

by Mwai Kibaki



The pressures of steadily rising numbers of people are exhausting the earth.

Family planning must become a common topic of conservation.

standard of which they will proud. That is the rational behavior of an individual.

We are all leaders by virtue of having been elected by our own people. But that is not enough. We must have the conviction that our role is not merely to try to persuade citizens that family planning is good for them. Our role is to challenge a citizen on how he can think of upgrading his livestock, how he can think of adopting new seed for his field production, on why he presses for better health facilities and yet he neglects the starting point: the size of his family, and, above all, the spacing of the production of the children, so as to preserve the energy and the health of the mother.

Now that is a social commitment we should demand of all citizens rather than focusing on the misfortunes that will befall our nations if we do not plan our families. If we continue to do this we will be reduced to promoting fear.

When we approach the ordinary citizen regarding the development of agriculture or industry or livestock or health or the construction of water supply in his village, we do not tell him about the misfortune that will befall him or his nation if he does not do what we are asking him to do. Instead we emphasize the benefits to himself as an individual. We address his self-interests. We try to relate all those activities to the improvement of his personal welfare and the welfare of his family. That way it is brought home to the individual that by our own efforts we will improve our own standard of living.

It is only afterwards that we put to him the aggregate effect of his growing more crops, of producing more milk, of doing all the other things we want him to do. But we do not start by generating the fear that if he does not do x, y and z, then the whole wrath of hell will fail upon his head. Yet in this subject of family planning, we have, over the last 30 years, emphasized the statistics of doom: how the world will be evil, how we shall have grown poorer, how we shall suffer even more through famine and malnutrition. All these things may well be true. They, in fact, may well happen if we do not undertake family planning. But when we confront an individual about a decision regarding his own personal life and the life of his own family, we must address ourselves to the benefits that shall come to him if he should plan his family properly. I believe if we take this approach, we will get people to be more responsive, we will get them to see the correlation between the size of the family and the standard of living. They will want to listen. They will want to discuss it with their neighbors.

There is no better way of propagating knowledge than to encourage neighborhood discussions. For this reason, family planning must be emphasized at the community level. Let them discuss among themselves how the standard of living can be improved in their own areas if families are regulated and if the size is such that they can effectively educate, clothe, and take better care of them in every other way.

The second aspect I would like to emphasize is that family planning is indigenous to the continent of Africa. We are very tired in this nation, and I'm sure in one or two other nations in Africa, of the bright, educated young who project family planning as something they have discovered in the course of their Ph.D. or M.A. and that, therefore, they are going to the village to bring this new message to the old who are ignorant. In our own societies, certainly in Kenya, family planning is indigenous. I, myself, come from a family of six. Now the nearest spacing during all of our six, and I happen to be the last born, is three years. My father, who is now 95, and my mother, who died at 80, could not have had access to family planning information. And yet they practiced it. We also know that in certain districts in Kenya where the old traditions have not vanished, family planning continues. The spacing of children continues, and it is observed by family traditions which are still carried out in some parts. But where these traditions have died off, and where people have adopted new methods and modes of life, problems have begun to arise.

In propagating family planning, we must acknowledge that the ideas which we should address to the people of Africa are not strange, they are not some importation from imperialists and others, who, according to some theorists, want to limit the number of the people from the Third World. If we realize, and bring to the attention of those who don't know, the fact that family planning is indigenous to Africa, we shall be spared the waste of time from the current dispute as to whether family planning is for the benefit of the people of the Third World or for the benefit of the rich. I think that is totally a mischievous debate. There is no way that we are going to force the rich to share what they have with the poor. Whatever gains the poor will make will come as a result of their own free decision, and the prospects are that aid that shall be given, in whatever form, to the poor, will never be adequate. The development of the poor of the world will be a result of their own efforts, efforts that will take longer than they think, and, more importantly, it will be an exercise in self-help and self-reliance.

I suggest, therefore, that we emphasize that family planning is indigenous to Africa. We are not introducing a new concept. We are introducing the new means, the new tools, the new technology to practice an already indigenous concept. Our role, therefore, is to show that these new methods are safe, they are proven, they have worked elsewhere. If we do this, we will be successful.

But in order to be successful, there is a third factor which is required for meaningful family planning programs, namely leadership. As you read the press of Africa, as you read the statements by leaders in Africa, there are very few top leaders who emphasize family planning. Very fortunately, our President, H. E. Daniel T. arap Moi, is one of them. Our President always speaks out, in every meeting he attends, that family planning is the intelligent behavior of citizens, that family planning is an integral part of development.

Indeed, over this last weekend, he gave an example in one area where he was speaking, which we all might use. He said to a group of villagers visiting him that they should think of the birds of the air. Before they lay their eggs, they have to make their nests, they have to plan; they program everything, and then they lay their eggs. Everything is well organized by the birds. Then, as intelligent human beings claiming to be more intelligent than birds, how can we fail to plan? President Moi, in telling that story, is challenging human beings to work that way. And I'm certain the villagers will never forget it because the challenge came from the head of state, from their leader.

We must come to the conclusion that leadership is a critical input in family planning. Our role as leaders is to educate the farmers, to educate the peasants, to educate the workers, that family planning is to their own benefit. And we are providing that education all the time. We educate them regarding the need for greater productivity, we educate the farmers regarding everything from better seeds, improved husbandry, and all other aspects relative to development of their

economic life. But when it comes to family planning, it is mentioned in passing. And that is the failure in the continent of Africa. We have to be able to realize where our failures have been. Then we have a chance of correcting them. If not, we haven't got a chance. It does not matter how detailed we research the solutions we pass in meetings, as we have done in earlier meetings. We will not progress unless we have leadership.

If we agree on these three aspects, I would suggest that we consider a fourth aspect: a global view of population pressures we will face in the next 50 years or so. That is very important to all of us. Population trends indicate that the rich one-third of the world will be smaller proportionately than it is now; by the year 2000 it will constitute only 13% of the world. This means that those nations will continue to have an infinitely greater standard of living and they will continue to widen the gap between their standard of living and that of the poor of the world because more than 90% of the world population increase will have happened in the poorest part of the world.

If we assume that this growth will cause a lag in development, then the obvious consequences are that the rich will become richer and the poor will continue pleading for a better share of the world's resources.

In the debate over the relationship between North and South, we must remove all that language and all those adjectives which constitute a sense of threat to the rich because it will be futile and, above all, it generates nothing but hate. There is no way that the poor are going to get assistance from the rich merely by trying to evoke a sense of sympathy. I think those in the North who are committed to help the poor in the South should show to their own people the greater benefits more rapid and more balanced development amongst the poor will bring to them. Even today, the recession in industrialized nations of the world could be very quickly cured if they were to help the poor of the world to expand their purchasing power. Because there are so many poor, if our purchasing power was expanded even marginally we would generate the demand that would bring greater production and prosperity in the world. The global view of population planning should be taken into account, but don't let it mislead us into laying the blame for our misfortunes at somebody else's door.

There is no better way to propagate knowledge than in neighborhood discussions.

Above all, don't let it mislead us into continuing to believe that there is something which can be done by the rich in order to assist with effective family planning. What they can do is very small, namely, to help train a few people, to help give us some of the equipment needed. But the bulk of the work—99% of the effort required—must be originated and carried out by the poor nations of the world themselves. In Africa, this is certainly true.

Overpopulation is not merely the number of persons per square kilometer in a particular country, or the number of persons per square mile in another. That has been one of the terrible aspects of the ignorance with which we are burdened and which stops rational thinking about family planning in the continent of Africa. Many Africans will tell you to look at all of this very rich soil, unexploited, unutilized, only waiting to be developed. Where is the population problem? Why don't we merely send the people to clear all these forests and cultivate more? In one sense, what they say is true. If we could immediately have the resources, the capital, the know-how, to put to good cultivation all the arable land of Africa, then, of course, we would have no population problem. It would be resolved.

But we know that there is no way that such magic can be performed. We know that the development of new technology is going to be a slow process. We know, even more importantly, that a change in production of agriculture will not be able to instantly cope with the present rate of population growth. Therefore, we need to organize these two developments so that our families do not grow faster than we can take care of them—even with the resources we have, even with the new technology we have available to us in Africa. ☐

Mwai Kibaki is vice president of the Republic of Kenya. This article is adapted from his remarks at the July Parliamentary Conference on Population and Development in Nairobi.

A LITTLE GOES A LONG WAY

by Alexanderina Shuler

Partners of the Americas fund small projects, get large returns.

Salvador Mesh is a young farmer in San Antonio, Belize. He grows corn and raises livestock. Until last year, Mesh had always wanted to raise hogs, but never had the opportunity.

In 1980, Mesh was one of five farmers selected by the Belize Agricultural Society for a feeder pig project. Today, he raises high-quality swine that bring a good profit in the market and provide him with a supplemental income as well as a new source of nutrition for his family.

Salvador and the Belize Agricultural Society are beneficiaries of an innovative grant program developed by the Partners of the Americas. Now in its third year, the small Partners grant program makes awards of up to $5,000 for small-scale community-level development projects approved by the local partnerships in Latin America and the Caribbean.

Partners President Alan Rubin reports, "We have found that approaching things in a small-scale manner generates excellent results. The 53 partnerships are a built-in, low-cost marketing mechanism already in place to identify and assist workable community development projects. Other activities of the partnership add on a multiplier effect of $12 worth of goods and services for every dollar invested by the Partners."

In 1979 and 1980, Partners received funding for small grant projects from the International Minerals and Chemical Foundation, which helped establish the Partners/IMC Foundation Agricultural Development Fund. The IMC foundation has since been joined by such contributors as the Charles S. Stewart Mott Foundation, the Xerox Corp., the Rockefeller Brothers Fund and AID. A total of 39 small grants have been awarded, one of which went through the Belize-Michigan Partners, to the swine industry project.

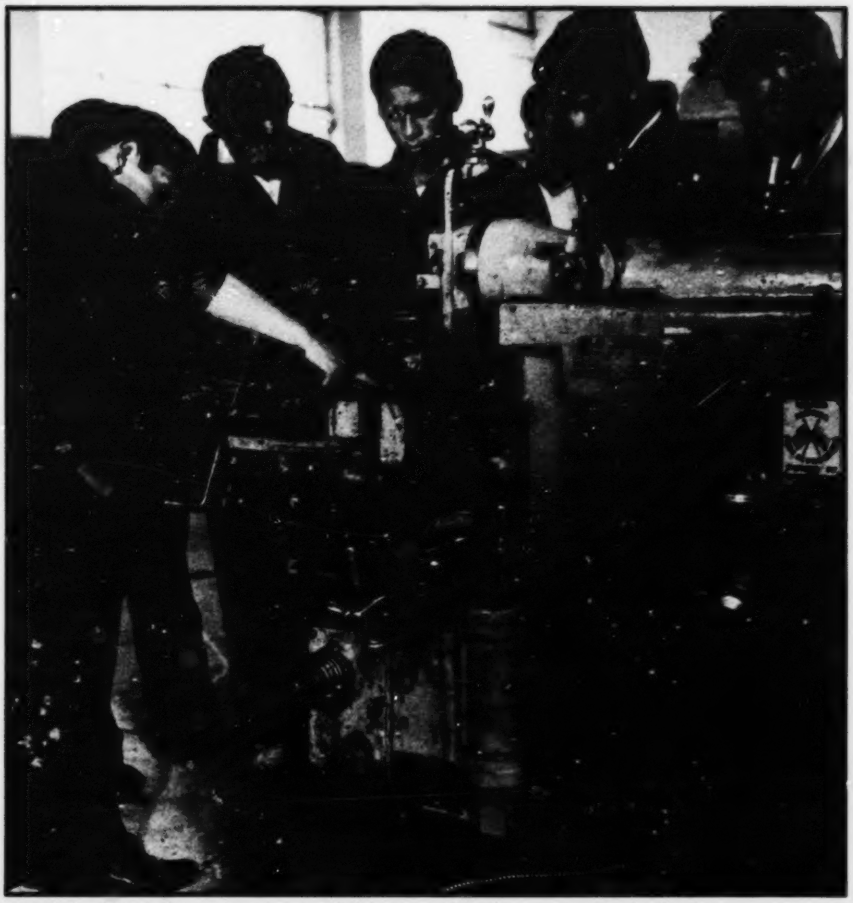
The Belize-Michigan Partners work with other organizations on the project, embodying the Partners' positive approach to institutional linkages.

Workers in Bolivia read about a Partners effort to rehabilitate a textile mill.

Farmers selected for the pilot project received training from the Extension Service of the Belize Department of Agriculture in pig raising, then were lent the money for materials to build the pens to house an initial 10 piglets. Costs were to be repaid from the sale of pigs. The feed, developed from local materials in cooperation with Heifer Project International, Michigan State University Extension Service and the Michigan Partners, also was to be repaid by the sale of the first batch of pigs.

After six months the pigs were marketed at above-average prices, enabling participating farmers to repay their loans, with cash left over. A second group of piglets has since been raised and marketed, and now the farmers have their own permanent breeding stock. The Belize Agricultural Society has received numerous requests from farmers who want to participate in the program, and is using the program as a model for extension activities.

Partners of the Americas is a private, voluntary technical assistance organization linking the citizens of 44 U.S. states with those of 24 Latin American and Caribbean nations in "partnerships." Partnership committees are composed entirely of volunteers who work with their counterparts in carrying out proj-



AID helped fund this automotive workshop in an Ecuadoran vocational school.

This cane production project in Colombia is an example of the small grants program.

ects in agriculture and rural development, health, education, community development, rehabilitation and special education, energy, arts, sports and journalism.

Partners was born out of the Alliance for Progress in 1964, as the Alliance's private citizen component. The organization started under AID management, which formed and guided the first 38 partnerships and provided funds for travel grants for project activity.

In 1970, AID transferred its functions to the National Association of the Partners of the Alliance, bringing the Partners program under private, non-profit management. That year, the organization's name was changed to Partners of the Americas. Since, 15 additional partnerships have been created, for a total of 53. AID continues to support the program, and the Partners have diversified funding to include 35 U.S. corporations, foundations and other government agencies.

Partners received an AID grant last year to establish six new partnerships in the Caribbean, in addition to the existing six. Three have already been created in St. Lucia, St. Vincent and Dominica and the other three will be established by 1983, in Montserrat, St. Kitts/Nevis and Antigua.

1979 marked a major change for Partners, as it moved away from its exclusive role as a provider of volunteer technician travel funds, and into a new role as granting agency. In 1981, Partners will make available to the partnerships $159,000 in small grants for projects, and it will invest an additional $112,000 in existing regional resource centers for community education and for delivering appropriate technology to meet the needs of disabled persons.

Competition for Partners small grant funds is stiff and the criteria are tough. Project proposals must demonstrate long-term continuity, educational benefit, capacity-building components and strong multiplier value. Emphasis also is placed on cooperation with other organizations, or on activities that will add a new phase to an on-going project.

Input from Latin American and Caribbean partners enables the funds to go where they are most needed and where a small amount of money can have significant impact.

Linking up with other organizations to bring added resources to a project is a key part of Partners' work. For example, the Minas Gerais (Brazil)-Colorado Partners were awarded a $4,000 grant in 1980 to work with two local community organizations in the poverty-stricken Jequitinhonha Valley, where agencies had been working to establish a

A small grant enabled these women to start a sewing co-op.

farmers' cooperative. The money bought the materials to build a market center and storage facility for the cooperative. A Colorado cooperative marketing specialist worked with the project for several weeks, helping design the long-term plan for turning over management and ownership of the cooperative to local farmers.

According to the most recent AID evaluation of Partners of the Americas by former Ambassador William Stedman last November, "The program continues to complement AID's development objectives by carrying out small but meaningful projects for low-income beneficiaries in agriculture, health and education. Partners has established strong links between institutions and their professional staffs in most states and countries and scores of development projects have been carried out."

Some other examples of the uses of Partners small grants:

In cooperation with the Peace Corps, the Ecuador-Kentucky Partners launched a vegetable production project with a 1979 grant. Two demonstration sites in rural provinces were selected for trial growth and demonstration. Dozens of varieties of seeds were tested to determine which wore most suitable for the areas. The 120 farmers involved in the project have doubled, and in some cases tripled, yields due to new seed bed techniques, fertilizer practices, crop rotation plans and better use of pesticides and insecticides. An estimated 450 persons have participated in extension activities. Results of the project are being made available to local growers, and word-of-mouth has created heavy demand for information. Additionally, seed and agro-chemical import companies have expressed interest in using the project results to determine future importation of seed varieties.

In Curitiba, Brazil, 30 women formed a sewing cooperative and with a $2,845 grant from Partners purchased 11 sewing machines and cloth to make dish towels. In the year since the co-op began, an additional 10 women have joined the group, which has produced 2,500 dish towels per month to sell to local stores. Each woman makes about $60 per month, about 75% of the Brazilian minimum wage. Participants report their additional income has improved their families' standards of living as well as their own sense of self-esteem and self-reliance.

In addition to the small grant program, the Partners' national association coordinates and assists the work of its 53 partnerships. The partnerships themselves carry out hundreds of development projects each year, financed by in-kind donations, local corporate funding and local fund-raising activities. Each year 5,000 individuals travel back and forth between their Partner areas to work on projects. Of these, 4,000 are financed by the partnerships themselves. ☐

Alexanderina Shuler is editor of "Front Lines," AID's internal newspaper.

NATIONAL SECURITY AND INTERNATIONAL DEVELOPMENT

Military might is only part of the formula for peace.

by Thomas W. Wilson Jr.

I take it for granted that the supreme national interest of the United States is to manage the nuclear stand-off with the Soviet Union so as to prevent a suicidal war between the super powers. This must be the bedrock purpose of national security policy for the indefinite future.

My question, however, is: Is that the *whole* of the modern security problem? And my answer is: Not by a very long shot! Indeed, my general thesis is that our security is significantly endangered precisely by the present lack of a national security concept that is relevant to the political, social and strategic realities of the 1980s and 1990s. I believe our doctrine is dangerously limited and there are important threats to national security that are grossly neglected in policy, planning and public debate.

But first, I suppose I ought to state for the record my view that nobody of sound mind can ignore the reality and dangers of traditional international conflicts, of political extremism, of militant fanaticism, and of military ambitions lying around loose in an unstable world that is armed to the teeth. We have no choice but to look to our armed forces for military protection. And I have no prescription for them, other than the rather obvious observation that our armaments should be whatever is needed to perform the roles and missions of the armed services and, equally obvious, the roles and missions of the armed forces can only be defined rationally by derivation from the foreign policy objectives they are meant to support.

What I want to do, rather, is to come down as I can on the realities and dangers of certain non-military threats to national security at this moment in history. Obviously security has never depended entirely on military force. Diplomatic skills, economic capacity, technological innovation have been related closely to military effectiveness for a long time —not to mention such abstractions as leadership and troop morale as they affect military capabilities.

But, of course, one can carry the point about non-military aspects of security to the absurdity of arguing that, in one way or another, it covers every aspect of society and every attribute of the culture. This is idle obfuscation and a cop-out on the real problem.

In my view, what we must now crank into a working concept of national security for the rest of this century are four categories of current threats to the security of this country that are wholly neglected in traditional security analysis, presumably because they do not take a military form and are, indeed, indifferent to military power.

First, a threat to the viability of the planetary biosphere. As Lester Brown (president of Worldwatch Institute) started pointing out a couple of years ago, the basic biological systems of earth that, over the millenia, created conditions favorable in life —and which have since supported the only life we know of in the universe—are now deteriorating under the growing impact of the total activity of the human race. There are other physical threats to systems integrity—to the ozone layer, to the climatic system, to threatened species, coastal zones and genetic diversity. But the deterioration of croplands, pasturelands, forests and fisheries means that the most elementally strategic of all strategic systems are vulnerable, threatened, weakened and without adequate defenses as things stand today.

The point is very simply: It is a logical absurdity to believe that any state can find national security on a planet that is itself insecure. There simply is no such thing as national security under these conditions, so I shall not labor the point any further.

Second among contemporary non-military threats is the vulnerability of critical global services. One could argue about just how to define these and just what to include in the category. For present purposes, however, it is enough to ask whether anyone can imagine security without international communications by mail, telegraph, telephone, radio and television—all of which depend upon international agreements, arrangements, institutions and rules of the game. Can we think of what it would be like in this world if a commercial airliner could not land at any major airport in the world with assurance of reliable navigation guidance, communications, fuel supplies, repair facilities and standard ground services of many kinds? Where would weather forecasting be without the World Weather Watch?

The point here is not to make an inventory of critical utility services in the modern world. The point is that man-made technological systems, like natural biological systems, also are globally integrated—that they, too, are subject to overload, breakdown and direct attack—that we, as a nation, are deeply dependent upon their functioning reliably and effectively—that national systems are integral components of global systems—and that it is very difficult even to think about national security in a world without working technical services serving as a kind of vital metabolism for the international community. It follows that a modern concept of security should embrace the integrity of the technosphere as well as the biosphere.

U.S. industry depends on Third World minerals.

The rising number of refugees also threatens stability.

And perhaps this is as good a place as any to dispense with the curious canard which holds that international cooperation and organization are needed more by the small and weak than by the large and strong among nations. With a moment's reflection it is perfectly obvious that the bigger and richer and stronger and more advanced any nation is, the more dependent it is upon international services—and the more vulnerable it is to their interruption.

Third among the non-military threats is the danger of chaos—or worse—in the global commons.

For one thing, Antarctica is the only continent unpolluted by arms or military installations; it is a community wholly devoted to the pursuit of scientific knowledge; it is home to international enterprise in which cooperation is institutionalized and secrecy is forbidden. The treaty formalizing these uses of Antarctica expires soon and there have been some ominous noises about backsliding to the pursuit of competitive national claims and to a free-for-all over marine and other resources of the region.

From the ice packs of Antarctica to the stony surface of the moon there is danger that a generation of efforts to bring law and order to the great global commons could go down the drain. There is no time here to speculate on all this for the future of nations and peoples; it is enough to note the current existence of these non-military dangers to the future security of the United States. For without ground rules governing the uses of Antarctica, outer space, the moon and the high seas, the whole notion of security in this world starts unraveling at the seams.

Fourth, and finally, I come to the threat that is the most difficult to envisage in a national security context, but which is, in the end, the most fundamental danger because it underlies the others.

I refer to the threat of political paralysis—of a general failure to cope with contemporary problems—of institutional breakdown and ultimate collapse of the political process at national and international levels. And it is here that we come to the connection between international development and the national security of this and other nations. If we are not to have war we must live in peace, and if we are to live in peace we must avoid potential conflict

Western manufacturers must be able to continue exporting their goods.

when we can and resolve or manage conflict when it materializes. And the avoidance, management and resolution of conflict is the heart of the political process.

Now, when the capacity to make political decisions—to choose between alternative courses of action—to act in time and in ways that bring political purpose to bear upon the course of events, when that capacity breaks down or becomes paralyzed, a pre-condition for living in peace disappears. Over and over again, we have seen how paralysis leads to political polarization. And with polarization, the potential for conflict resolution or management is all but destroyed. For when conflict is polarized, the middle ground is abandoned—and it is only from the middle that conflicts can be mediated. So communications break down; debate turns to diatribe; the poles are manned by extremists; the political process sticks on dead center; and the only remaining path for the resolution of conflict is violence.

How much evidence do we need of degeneration from political paralysis to polarization of conflict to mindless violence—what with Ireland, Lebanon, Iran, Cambodia, Ethiopia, El Salvador? How much warning do we need of the connection between polarization almost anywhere and the security of the United States—given the strategic importance we attach to the Middle East, Southeast Asia, the Horn of Africa, the Caribbean?

Right now we are very close to a state of general paralysis in our capacity to cope with the agenda of issues that have top priority for a large majority of nations.

The emergence of a new majority in the United Nations is a political fact of life that, in my view, has been much underrated. The new majority, of course, cannot force anyone to do anything. But that does not leave it helpless. For the majority *can* influence the shape of the global agenda—and it has. It can internationalize subjects that formerly were considered to be domestic subjects—and it has done that too. The majority can politicize subjects that have been dealt with previously at the technical level—and this also has happened. Indeed, the new majority can shift the mainstream of day-to-day international affairs; it has, in fact, brought the subject of economic and social development in from the fringes to the center of the main arena of global politics.

Another word for development, of course, is modernization. After leaving its Western origins, the urge for modernization spread through the rest of the world until it became a universal phenomenon just a few years ago when it was adopted as the centerpiece of Chinese policy by the heirs of Mao Tse-tung. So there

Uninterrupted international communications are essential to national security.

is nothing surprising about the fact that this subject is now squarely in the middle of the global agenda—as top priority for a large majority of the nations of the world.

We have been learning that, while modernization necessarily means many things at different times and places, it is an engine of social change. It therefore confronts political leadership with excruciatingly difficult choices as to what must be changed in the name of social progress and must be maintained in the name of cultural continuity—a universal urge for the one contesting a universal need for the other.

Unless population growth declines deprivation, hunger and turmoil may worsen.

Thus, the management of modernization can be seen as a central political task of our times—and a pervasive test of political capability at national and international levels. If the institutions of governance can cope with this problem with reasonable effectiveness, there is every reason to hope for a relatively painless transition to the next stage of an evolving world community. But if our political institutions—faced by the unprecedented complexity of interdependent nations and integrated problems—either collapse or become paralyzed, then we can surely expect an accelerating slide into revolving chaos, tyranny and violence. And this is what international development has to do with the security of the United States of America.

How does a nation defend itself against violence that is a child of political paralysis? There is only one answer, it seems to me, and it is not to be found in geo-political theory. The antidote to stalemates and paralysis is initiative and action.

I believe it is now imperative—from many points of view and explicitly from the security viewpoint—for the United States to engage in positive political action on the global agenda that is mainstream politics for the world majority today—positive action that alone will guard against the dangers of stagnation leading to polarization in human affairs.

In principle, there are many ways to break the present deadlock and surely there is no single solution. But there is one place to start that appears more and more compelling to me—one place that seems to offer the most practical handle on the present predicament and the best chance to start reversing the dynamics of social and human degradation in a world getting dirtier, hungrier, more crowded, more quarrelsome and more prone to violence as the years go by.

This point of attack that seems most promising is to turn from talk to deeds by mounting a serious, systematic world action program to contain, reduce and ultimately eliminate chronic malnutrition among children, women and men in the world at large.

The moral, humanitarian and ethical foundations are universally approved; ideologically the case is unassailable; technically the task is feasible; governments already are committed to the goal in principle; and the key institutions already are in place. Of course, the subject is incredibly complex, but three major studies in the past year—the Brandt Commission, the World Development Report by the World Bank, and the Interfutures study by the OECD—all made very similar recommendations on what to do about it. There is no need for action to defer to further study.

So what is missing? The obvious answer is that there is not enough of the basic ingredient called "political will."

I, for one, have enough optimism left in my soul to believe that a wider public perception of the relationship between world hunger and national security might help generate a perceptible rise in the level of political will for turning the tide against the silent spread of chronic malnutrition in the world around us.

For, as I have argued here, the political, social and strategic realities of the 1980s are such that national security now requires, in addition to military protection, the security of strategic systems in the biosphere, reliable critical services in the technosphere, law and order in the global commons, and a political capacity to cope with the most pressing contemporary world problems. In these final decades of the twentieth century, international development and national security are too closely linked to stake our future on a dangerously narrow military base. ☐

Thomas W. Wilson, Jr. is former adviser to the U.S. secretary of state and to the U.N. secretary general. This article has been adapted from an address he delivered at the 1981 International Development Conference in Washington, D.C.

World Bank President A. W. Clausen yesterday (Oct. 2) endorsed an expansion of the lending capacity of the International Development Association from $12 billion to as much as $19 billion over its next three-year term beginning in 1984 despite clear pressure from the United States to limit the growth of such subsidized aid to the Third World.

—Hobart Rowen
Washington Post

MELBOURNE—Representatives of 41 British Commonwealth nations today (Oct. 4) called on the rest of the world to support urgent new talks between rich and poor countries to deal with worsening global disparities.

The appeal came in a joint declaration by leaders of the Commonwealth, which groups Britain and its former colonies. Issued in the Australia capital of Canberra during the leaders' weekend retreat, the document, called the "Melbourne Declaration," asked "real and significant changes commensurate with the urgency of the problems we now face."

—William Branigin
Washington Post

For over 30 years, the tiny British colony of Belize slowly gathered the recognized attributes of nationhood, including its own government, army, flag, currency and national anthem.

Amid the toasts and cheers that followed independence on Sept. 21, a lingering doubt floated among the foreign delegations who had traveled here for the occasion: Belize had become an independent state, but was it viable as a nation?

WHAT THE MEDIA SAY...

The question was, perhaps, not original. Over the past quarter century, dozens of colonies in Africa, Asia and the Caribbean have become independent and then struggled for survival, while some "mini-states" in the United Nations have even fewer resources, smaller territory and fewer people than Belize.

But in the case of Belize, concern has been sharpened by the fact that the new nation is part of Central America and Belize's failure to stand on its own could become a new factor of instability.

—Alan Riding
New York Times

One of the remarkable things about Latin America is its ability to move ahead despite the recession. The region's increased purchasing power means that its economic development has been inching—and in a few cases leaping—ahead making it an increasingly valuable customer for the things the United States' exports.

For example, the Commerce Department estimates that U.S. sales to Latin America in 1981 will show an annual rate of increase of just over 30%. Although the rate was below the 1980 increase of 40%, which reflects the expansion of the economic downturn in such customers for the region's imports as Germany, Canada, Britain, Japan, the Netherlands and others. The U.S. economy likewise is not up to par, but it is one industrial power where the economists report signs that it is one on the road to recovery.

—Ben F. Meyer
Arkansas Gazette

There are supporters of foreign aid in Washington who have painfully learned one rule: You're damned if you do and you're damned if you don't.

Take Pakistan, for example. Prompted by the Soviet invasion of Afghanistan, the Administration is seeking a new security relationship with Pakistan, including the sale of F-16 fighter planes. But last week there were reports of "suspicious" activities at Pakistan's nuclear reactor, near Karachi, which indicated that the possibility that nuclear fuel may have been diverted for non-peaceful purposes. The "irregularities" were denied by Pakistan but they reportedly have been detected by the International Atomic Energy Agency. They could jeopardize the $3.2 billion aid package the Administration is pushing because Congress must first waive a law which bars aid to countries suspected of developing nuclear arms. Pakistan has refused requests for improved surveillance safeguards; this threatens the Administration's nonproliferation policy.

—New York Times

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HANDICAPPED!
INTERNATIONAL
YEAR OF
DISABLED PERSONS

DEVELOPMENT UPDATE

The money management game is one of high stakes and recently many Third World central banks have become prime competitors—instead of easy prey. According to Business Week, throughout the 1970s, Third World banks left billions of dollars idling in non-interest accounts at U.S. banks, which, in turn, would lend this cheap cash at market rates, raking in the profits. But no more. With computers, the field of international money management has become wide open. These computer systems, used for years by multinational corporations and commercial banks, offer fast, accurate, comprehensive information and the ability to transfer billions of dollars from one account to another within seconds. By purchasing expensive electronic banking equipment—from U.S. banks trying to recoup some of their losses—Third World central banks can get a picture of their cash positions instantaneously and invest quickly in overnight markets. Now aware of the high interest rates their huge deposits can earn, many Third World countries are cultivating their own financial investment advisers and are becoming sophisticated and aggressive money managers.

Jamaica's economy, which had been declining for seven years under leftist rule, has turned the corner under its new leadership, according to a survey by that Caribbean nation's government. The projected 1981 growth in gross domestic product (GDP) isn't much—just 1%—but that's quite a bit better than the 1980 decline of 5.4% and the overall decline of 18.3% from 1973 through 1980. Inflation is way down, too—only 1.4% for the first six months of this year, compared to 16.6% in the first six months of 1980. Even unemployment is down—again, not much, from 27.9% in April 1980 to 26.2% in April 1981. But that means the creation of 39,000 new jobs.

Is the United States exporting some of its invaluable topsoil along with the bountiful harvests of grain the topsoil produces? In a manner of speaking, yes. For one thing, heavy planting every year removes much of the soil's nutrients. For another, farmers often plant every square inch of available land, even to the point of destroying trees and bushes planted as windbreaks after the "dust bowl" days of the 1930s. Result: About 1,250,000 acres a year out of about 400 million planted acres go out of production each year, according to a U.S. Department of Agriculture expert quoted in the New York Times. Over the next 50 years, the United States could lose 15-30% of its corn and soybean yields if the erosion rate isn't checked.

The sleeping giant is awakening. As China modernizes, many industrialized nations, especially the United States, stand to gain, says Lynn D. Feintech, author of a new Overseas Development Council study. Economic ties between the United States and China have strengthened in the past decade. U.S. exports to China increased $171 million in 1971 to $3.75 billion in 1980; U.S. imports from China increased during that time from $203 million to $1.05 billion. China is becoming an important source of our textile fabrics and fibers and strategic minerals. Later in the 80s, it is likely that China will be supplying us with oil as well. U.S. farm products dominate U.S. exports.

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Cover: Over 500 million people in the world today are disabled. They include the mentally retarded, severely malnourished, people with congenital diseases, chronic alcoholism and drug addiction. Of this group, more than 375,000 live in developing countries. For them even a minor disability means a life of special hardship. See article on page 2.

Cover Photo: United Nations

Photo Credits: Leonard Cheshire Foundation, pp. 2, 6; United Nations, p. 3; World Bank, p. 4; UNICEF, pp. 5, 6; Steve Haynes/AID, pp. 21-24; AID, all others.

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HANDICAPPED!

In the Third World, disability takes a heavy toll.

by Maxine Stough

Last year Moqbul was 5 and could see. But as the year wore on, his playthings got harder and harder to find. His vision dimmed. Moqbul, not understanding that anything serious was happening, just worked harder at playing; he didn't tell his mother. Today he is blind, one of 3 million victims of xerophtmalia, an eye disease caused by vitamin A deficiency. Even if Moqbul had told his mother, there probably was little she or anyone else in their village could have done. In the Third World less than 1% of the people suffering from any kind of disability ever receive trained help.

Over 40 million people in the world have been blinded by a number of things: disease, malnutrition, birth defects, accidents. They are only a small part of a larger crowd, 500 million in all, who suffer disabilities. The disabled include the mentally retarded, the severely malnourished, people with congenital diseases, chronic alcoholism and drug addiction. More than three-quarters of all of them live in developing countries.

This is the International Year of Disabled Persons, so named by the United Nations to begin a worldwide initiative to recognize the high human cost of diseases that blind and maim, of birth defects and injuries, and to spur action especially by governments and private groups.

While disability more often than not imposes hardships and robs people of full participation in, and enjoyment of, society anywhere in the world, its effects are especially harsh in the Third World. There, malnutrition and disease are the prime disablers. They do their worst harm during pregnancy and early childhood. The first five years of growth is a crucial period for brain development, and by the time a child enters school protein deficiency may already have caused irreversible brain damage.

Malnourished pregnant women often give birth to low-weight babies—more than 20 million of them each year in the developing countries. Among these smaller newborns, the incidence of blind-

There are about 15,000 amputees in South Korea and countless others who have crippling disabilities.

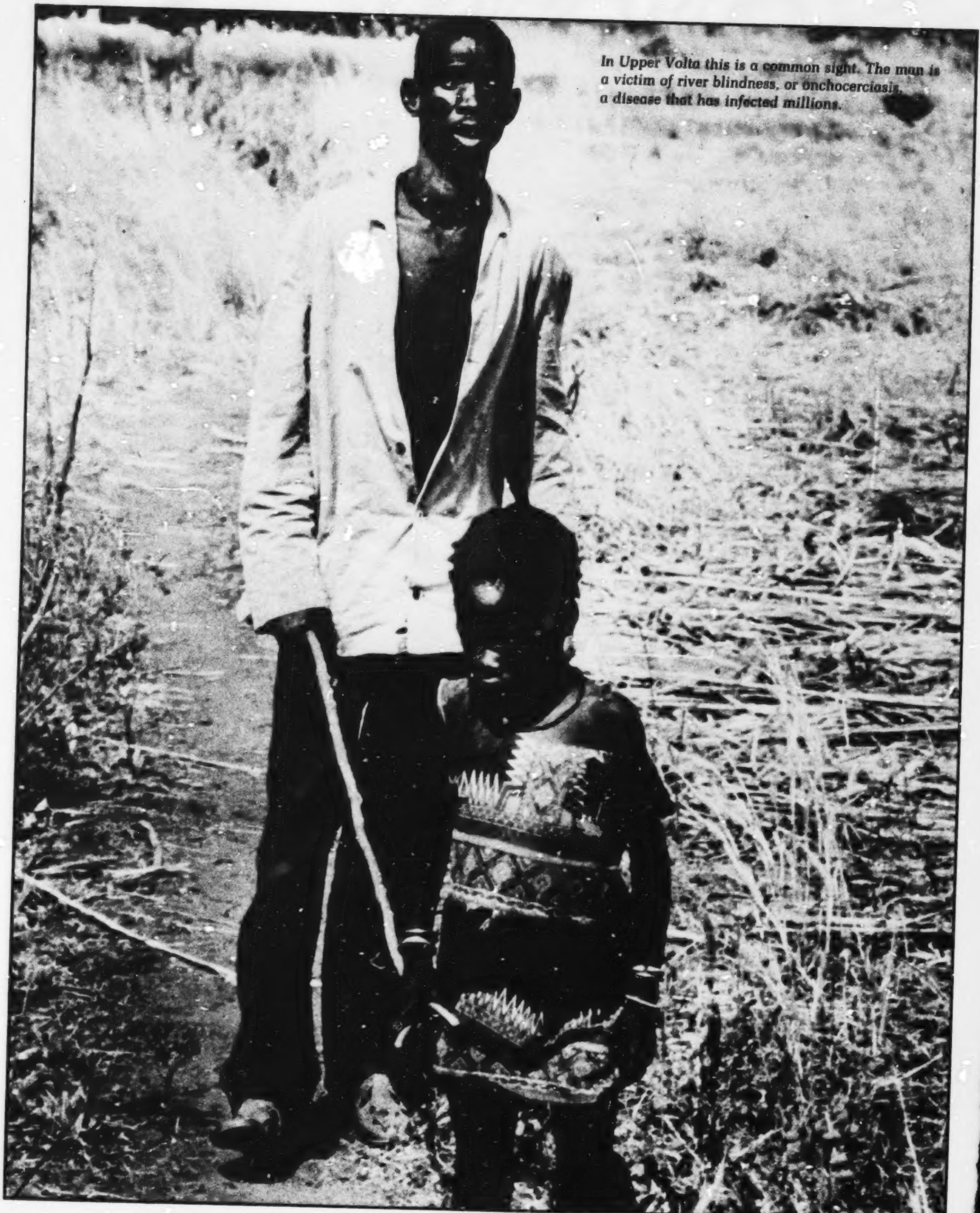
ness, deafness, mental retardation and motor impairments is quite high.

Diseases considered vanquished in Europe and North America still flourish in many parts of the world. Yearly outbreaks of polio in some countries leave large numbers of people crippled. Blindness is endemic in some areas.

Conquering diseases is crucial to the development process, and it's possible—smallpox has been wiped out completely, for instance. By the same token, in view of the Third World's desperate need for human resources—trained people—it is also critical that the millions of handicapped people be worked back into their societies as productive members. To help in that process AID and a host of private, voluntary agencies are supporting research, primary health care and even small businesses run in some cases by disabled persons.

One needs only to stroll through a village in Upper Volta and see scores of river blindness victims being led in the streets to fully understand what Sir John Wilson meant when he likened the economic impact of one blind African male to the loss of 2½ people from the economy.

Wilson, president of the International Society for the Prevention of Blindness and himself blind, explained that the first person lost is



In Upper Volta this is a common sight. The man is a victim of river blindness, or onchocerciasis, a disease that has infected millions.

the blind man who is no longer a wage earner. Then, there is the one who must support and care for the blind man. The one-half is the child who must lead him wherever he goes.

In Upper Volta alone, river blindness or onchocerciasis, has infected more than one million people and blinded 40,000. It is prevalent in seven West African countries. The larvae of a thread-like worm is transmitted to man by a black fly that breeds in the swift-flowing rivers of the area.

These "rivers that eat your eyes" snake through fertile agricultural land from which many people have fled. In countries that need those lands to produce more food, the black fly, then, has delivered a double curse.

The efforts of AID and other international organizations to control river blindness have met with some success in West Africa: in Mali—where its incidence fell from 50% to 10% of the population—and in Benin, Ghana, Ivory Coast, Niger, Togo and Upper Volta.

According to the World Health Organization, diphtheria, measles, polio, whooping cough, tetanus and tuberculosis disable 5 million and kill another 5 million each year because only 10% of the 80 million children born each year are vaccinated or otherwise immunized.

And while children in this country have been immunized against polio for years, polio has struck down an estimated 1.5 million persons in developing countries. Their immobility guarantees hardship and deprivation. Devices such as wheelchairs, braces or artificial limbs are expensive and often are not adapted for their use.

An AID grant to the New Transcentury Foundation to help organize disabled persons in Managua, Nicaragua, has led to the start of a local wheelchair manufacturing business staffed primarily by the disabled. A newly designed chair that is more maneuverable than

Efforts by AID and others to control river blindness have been successful in parts of West Africa.

Every year 250,000 children lose their eyesight through lack of vitamin A alone.

conventional ones that can roll safely and surely over cobblestone streets and rough ground will be available soon at a more affordable price than imported ones.

Still another disease, leprosy—the scourge of biblical times—is now curable. Yet it remains prevalent in some parts of the Third World. In its advanced stages, it eats away parts of the body. About 3.5 million people have been maimed and crippled by this disease, which, because it is contagious, exacts a double penalty on its victims, physical handicap and social stigma.

In most places even children of lepers have to bear the social burden. In Ghana, outside Cape Coast, there is an AID-supported community for people whose leprosy has been arrested. There cured lepers live and till the earth alongside their socially outcast children.

They sell their farm produce to outsiders. The money they earn has helped some buy artificial limbs.

The severity of the ignominy that the physically and mentally disabled must endure in the Third World varies in form and degree from culture to culture. In most, they are either reduced to begging in the streets, hidden so that the family can avoid stigma, or

The physically and mentally handicapped endure ignominy in varying degrees.

Rebuilding Limbs, Rebuilding Lives

Cesar, who is 14 years old and a geography buff, plans one day to be a cartographer. Every day he practices drawing in his home in Gilroy, CA. But Gilroy is not his real home—that's in Medellin, Colombia, where his natural parents live.

When he first arrived in the United States two years ago, Cesar could hardly use his hands. They seemed hopelessly clubbed, and because his chin was fused to his chest, he could not move his head.

These impairments occurred after he was severely burned at the age of 11. While he played in a restaurant's kitchen where his father worked outside Medellin, a nearby stove exploded. For a while it was touch and go. The hospital in Medellin did what it could for him. His mother prayed for him daily. And, while he lived, it seemed that he would never overcome his disabilities. If a severe burn is not given proper care immediately, the skin literally shrinks, immobilizing or fusing parts of the body together—it's a process called contracturing.

A Peace Corps volunteer working in the Medellin hospital brought Cesar's case to a non-profit group of plastic and reconstructive surgeons, pediatricians, anesthesiologists and nurses active in Colombia.

Because Cesar's case was so complicated and would require multiple surgeries, the group, Interplast, brought him to California where he was placed with a family who could speak Spanish. The surgery in Stanford University Medical Center began shortly after his arrival. It's almost finished now. Cesar can use his hands to draw and can even move his head. Perhaps in a year or so, after full recovery, he'll be able to go home to Colombia.

Surgery is reshaping the future for many burned and debilitated children.

Last year, volunteers for Interplast made 16 trips to developing countries. Last year alone, using the services of 111 volunteer professionals the organization accumulated 861 free operations to its credit which, if they were to be performed in this country would be valued at $1.5 million.

For the most part, trips to the eight nations in which the group works follow the same pattern. A team arrives, moves in with a host family and takes over the hospital operating room for two weeks. Also while there, the visiting health care professionals train their host country counterparts in the fine points of primary burn care.

The emphasis of Interplast's work is on children with burns, or with birth defects such as cleft palate. But on a recent trip to Lesotho, one of the physicians fashioned a nose for a young girl who had lost hers to leprosy. Although completely recovered from the leprosy, before her nose was replaced she refused to leave the leprosarium.

In cases like Cesar's, Interplast brings the patient to the United States. Between operations, the patients live with foster parents who speak their language. In 1980, through Sister Cities International and in cooperation with Interplast, AID funded the trip of a Lesothan physician who came for month-long rotations in three separate burn facilities to learn more about primary burn care.

Besides regaining the function of his hands, in the two years that Cesar has lived here, he has learned English. Of course he misses his parents. The Los Angeles Rotary Club recently raised money to pay his mother's plane ticket so that she could visit her son. The next time it will be Cesar who goes visiting.

—Maxine Stough

ignored. Rarely are they loved and cared for.

Whatever the prevailing attitude, their survival may well hinge on learning some kind of skill.

Goodwill Industries, with the help of $1 million from AID since 1976, has sought to help rehabilitate the handicapped in Africa and the Caribbean by offering technical assistance to local affiliates. In nine African countries, programs use cooperatives, cottage industries, production workshops or small business mechanisms to train and employ youth and adults with mental, motor, sight and hearing impairments.

In Cameroon, four workshops operated by the disabled turn out clothing, rattan items, leather goods and wooden toys. Last year, the four workshops together grossed $410,000.

In Barbados, Goodwill is helping two small businesses explore the possibility of merging. One is run by the blind, the other by the mentally retarded.

Beginning in 1982, the Salvation Army, as part of a $3 million AID matching grant, will begin a vocational training program for the blind in Mizoram, India. Within two years, it is anticipated, 140 blind youth and adults will learn the skills of carpentry, tailoring and cane furniture making.

Another Salvation Army project helped by AID in western India will focus on prevention. Village health workers will be trained to diagnose potentially disabling ailments and to refer the acutely ill to the nearby Salvation Army Hospital. These health workers will concentrate their efforts on the prevention of vitamin A deficiency and communicable disease.

Disease, malnutrition and birth defects are not the only disablers. Accidents happen, and they can ruin lives. People break bones falling from trees while gathering fruit, or in mishaps carrying heavy loads. If the breaks are not set properly—and often they are not—they cripple.

In many developing nations, open fires used for cooking and heating cause burn-related disability, especially in small children. Burn victims in the Third World often are not given proper care immediately. If the injured person lives, it is not uncommon that he lose an arm or leg. Or that the skin of one burned leg will fuse to the other, the skin of an arm to the side, a chin to the chest.

While visiting a rehabilitation center in Tenkodogo, Upper Volta, a Goodwill Industries staff member recalls seeing a teen-age boy who had been severely burned as a small child. His legs had fused. He would be crippled probably for the rest of his life.

Dr. David Fogarty, a plastic surgeon on the faculty of West Virginia State University Hospital in Morgantown, says that once different parts of the body have fused, the damage cannot always be surgically repaired because of underlying changes in the bones and joints.

AID funding through Sister Cities International helped finance Fogarty's work with burn victims in Lesotho. Last year, he spent six months training a local physician and four nurses in burn care.

Because development projects generally concentrate on benefitting the greatest number of people, the integration of services for the disabled with other projects has proven to be a useful rehabilitation tool. A vocational education project in Ghana, partially supported by AID funds through Sister Cities, includes both the disabled and able-bodied. Shaped by the Oakland, CA, Goodwill and YMCA, this school will teach a variety of trades and will have the capacity to handle about 250 students.

In an education project in Indonesia, Helen Keller International (HKI), with AID funds, has integrated blind children in the classroom with their sighted peers.

Community-based approaches are being used increasingly in the prevention, treatment and rehabilitation of the disabled. In the Philippines, for example, HKI trains local people to rehabilitate the blind in five strategically selected rural regions.

In Kenya, the International Eye Foundation, like the Salvation Army and HKI, took a community-based approach in its primary eye care program funded by AID in 1976. Village health workers are being trained to diagnose, treat and refer eye health problems. Finding that cataracts and glaucoma are the main diseases leading to blindness in the country, the project continues to train clinical officers to surgically treat cataracts and identify glaucoma patients for referral to ophthalmologists.

Partners of the Americas, through its PATH program, is providing training and self-help activities for the disabled, including the blind, in Costa Rica. AID is contributing $30,000 to this effort. Another of PATH's endeavors, setting up resource centers for the handicapped in Costa Rica, Jamaica, Ecuador, Uraguay and Brazil, is supported totally by the private sector—it's funded by IBM Americas/Far East Corp. The centers are the beginning of a future inter-Americas network through which human and technical resources as well as appropriate technology for the disabled can be shared.

Most disabilities don't have to be. Through prevention, treatment, rehabilitation and information sharing in these and hundreds of other programs supported by both public and private organizations, the so-called disabled can become able contributors to the economic development of their countries. ☐

Maxine Stough is a writer in AID's Office of Public Affairs.

Vision for the Future

by Michael Walter

Poor eyesight may be holding many countries back.

Lack of adequate optometric care, especially among school children, may well be one of the chief barriers to more rapid economic development in many poor countries.

I became convinced of this while I was a Peace Corps English teacher in the Ivory Coast from 1970 to 1972, and what convinced me was that nearly all my students had *excellent* vision.

In two years of teaching at a small up-country secondary school, I worked with about 300 students. A few of the richer students wore glasses, and there were usually one or two others in each class who asked to be seated at the front of the room to see the blackboard. In general, however, there was little to suggest that uncorrected refractive disorders were widespread among my students.

A reasonable explanation for this eluded me until I began to visit classes at a nearby primary school.

The primary classes I observed were huge! Students often were seated far from the board and were taxed with learning French as well as substantive subjects. Teachers rarely gave students individual attention. When they did, they were concerned with grooming the best for advancement to secondary school instead of scrutinizing the causes of failure among poorer ones.

In these circumstances, children with poor eyesight tended to fall behind. The result was—I believe—that students with good vision were better prepared to tackle the tough matriculation exams that opened the door to coveted places in secondary school. To sit in one of those places meant, therefore, that one had a good pair of eyes as well as a good brain.

Two authors of whom I am aware—Lewis Mumford and Arthur C. Clarke—have suggested independently that the invention of eyeglasses was a major factor in launching the Renaissance because it permitted scholars, clerks and artisans to pursue their careers despite the nearsightedness of advancing age. Could a similar revolution in learning and productivity be sparked in the developing world of today with the wider availability of optometric services, particularly to the school-age population?

For sound reasons, eye care programs in developing countries have focused primarily on preventing blindness. Since most pathological blindness in the Third World is preventable through relatively inexpensive means, these programs tend to yield impressive results on shoestring budgets.

Unfortunately, the high cost of frames and prescription lenses deters the development of programs to diagnose and treat refractive problems. Private volunteer programs such as Volunteer Optometric Services to Humanity struggle with used eyeglasses to help needy patients in a few countries. But even these heroic efforts are no substitute for systematic planning to promote the delivery of optometric services as part of each developing country's health care system.

Good vision is a basic human need; and money spent to promote good vision multiplies the effectiveness of money spent elsewhere. Research and planning can reduce the cost of vision care and lay the foundation for delivering needed optometric services to the world's poor. □

Michael Walter, formerly State Department country desk officer for Chad, Togo and Mauritania and Peace Corps volunteer in the Ivory Coast, is a member of the Indiana Bar.

People are what bring compassion, energy and the personal touch to the development process. Well over 80,000 Americans work abroad and in the United States through 48 private and voluntary organizations (PVOs). The founders of these non-profit organizations—like those who work for them—are individuals who, in many cases, have made personal sacrifices to offer their skills and assistance to the people of the Third World. They are people like Robert Hingson, Jim Turpin, Harry and Bertha Holt and George Kessler.

What makes Americans like these substantially modify their goals and lifestyles, some of them forfeiting lucrative careers, to help the less fortunate in countries outside their own?

Dr. Robert Hingson, founder of Brother's Brother (Pittsburgh, PA) traces his decision to a scene he watched unfold every night across the street from his boyhood home in Alabama. In the house across the street lived a doctor who worked among the poor.

"From our home, I could look into his back yard and see the chain of people day and night—mothers with babies wrapped in blankets, people with deformed limbs, children, sick or hungry or crippled with polio. And living on a cemetery road and seeing the small and large caskets pass by also struck me with the reality of the times."

Robert Hingson, the boy, was impressed. And because he also felt the strong command of God to "go into the world and preach" Robert Hingson, the physician, did—through medicine.

His invention, the peace gun, is a jet inoculator that revolutionized mass inoculation. It uses no needle and is so rapid that hordes of people can be inoculated in one day. High-velocity injection penetrates the skin, leaving only a small pinprick about the size of a mosquito's nose or one-tenth the size of an ordinary hypodermic needle. It has spared over 600 million people in 60 nations from the ravages of diseases like polio, tetanus, measles, diphtheria, pertussis and influenza.

In Liberia, Hingson and his team of 11 set a medical record in 1962 with the gun by immunizing 50,000 persons in one working week. To do this, the team had to meet a daily quota of 10,000.

They started in Monrovia. At the end of the first day, the tally showed that only 9,982 inoculations had been given. It was 10 p.m. and dark when Hingson set out alone on foot to scout out the additional 18 people the team needed to meet the day's quota.

He recalls that he happened upon an all-night barber shop and inoculated two as they sat in the barber chairs, the two barbers and four men who were waiting. One of the barbers suggested he might find the additional people he needed by going down to "the bonfires where they roll the dice," but cau-

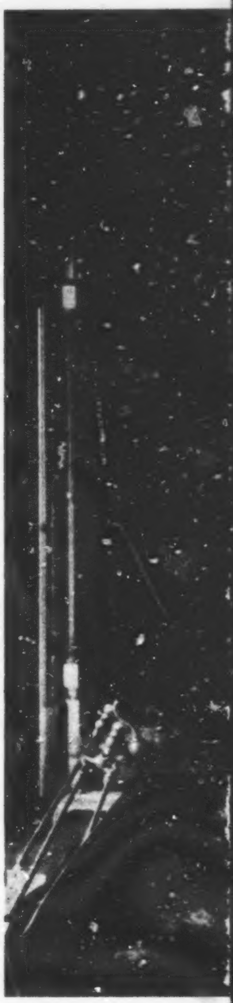
PEOPLE TO PEOPLE

Private voluntary organizations help keep the humanity in development.

by Maxine Stough

Dr. Robert Hingson who set a record of 10,000 smallpox inoculations per day later founded Brother's Brother.

Dr. James Turpin turned from a lucrative medical practice to start Project Concern.



Businessman George Ke

tioned Hingson that it would be dangerous to go there alone.

By then, he found himself in the slums of the city, over a mile from his hotel. But, undaunted, he made his way to the gamblers and in the flickering campfire light, he explained to them the importance of being inoculated. He came away, having picked up seven converts.

Still short three, Hingson stopped on his way back from the bonfire, at the darkened windows of a lean-to shack and hammered on the door. He roused its inhabitants and inoculated all three, thus completing the 10,000 tally before returning to his hotel shortly after midnight.

Within four years, the smallpox incidence rate of Liberia had dropped dramatically to where only a few cases were left. Meanwhile, in neighboring Sierra Leone, the disease was on a rampage.

After his success in Liberia, Hingson started Brother's Brother Foundation. It dispatches medical teams and supplies and emergency relief services throughout the world.

While Hingson was heading for Liberia, Dr. Jim Turpin opened his first clinic in Wall City, a slum section of Hong Kong where 50,000 people live in poverty and disease within six square blocks.

After medical school, Turpin set up a lucrative medical practice in California. But soon his religious Kentucky upbringing prompted him to volunteer his skills to the needy. In his spare time, Turpin began to

ler started the American Foundation for the Overseas Blind.

work in a clinic in one of the poorest sections of Tijuana, Mexico. One night, after having saved the lives of two small boys, he was returning to his home across the border in affluent Coronado, CA, when he had an experience that changed his life.

"It was half an hour before midnight when I climbed into my car to drive home," he recalls. "I had the most exhilarating feeling of absolute satisfaction I had ever known. There wasn't a shadow of a doubt that these children would have died had I not been there. I wondered how many other children in other parts of the world were dying because there was no doctor to help them through a crisis."

At that moment, Turpin knew he was destined to do something. He didn't know exactly what. "It would be something radically different," he thought. "Something that would give me the pleasure in the sheer joy of being needed."

The answer was not long in coming. While visiting one of his patients, Turpin heard a vivid account of the intense suffering of Hong Kong's poor; he realized then that his life's work would be in helping these people. He explored working through medical organizations such as World Health Organization, MEDICO, Project Hope and World Vision. Nothing seemed to work out, so he started his own organization—Project Concern in San Diego, CA.

One year after opening the first clinic in Hong Kong, Project Concern opened a second facility—a floating clinic on the waterfront. Since then, Project Concern has expanded to provide primary and preventive medical care, nutrition and paramedic training for the poor in Mexico, Indonesia, Ethiopia and Guatemala.

It was a harrowing accident that led George Kessler, an American businessman, to start the American Foundation for the Overseas Blind which in 1977 was named Helen Keller International (HKI). World War I had been a bloody reality for nine months when on the night of May 7, 1915, the Cunard liner *Lusitania*, on route from New York to England, was torpedoed and sank.

Kessler, the international distributor for Möet Chandon champagne, was on board. For seven hours that dark night, he clung desperately to an oar in the icy water. He thought he would die at any instant. He vowed that if he survived, he would do something for the victims of the war. Kessler was lucky. He was among the 800 rescued. While he recovered in a hospital in England, he became interested in the needs of soldiers who were blinded in battle.

Six months after the *Lusitania* disaster, the Kesslers formed the British, French, Belgian Permanent Blind Relief War Fund, HKI's predecessor organization. Today, this private non-profit organization in New York City is active in the prevention, treatment and rehabilitation of blind persons throughout the world.

Neary 40 years after the Kesslers had founded their organization, a couple from Creswell, OR, saw a film about Korean children orphaned by the Korean War. Harry and Bertha Holt, who were in their 50s at the time, had always liked children. They had six of their own, almost all now grown. They were so moved by the plight of the orphans—particularly those fathered by American soldiers—that Harry, a lumberman, took time off and made a special trip to Korea. He returned with eight homeless children whom they adopted.

The children's arrival was met with heavy media

Harry and Bertha Holt

Holt traveled to Korea and returned with eight homeless children.

coverage and a deluge of letters from people asking how they, too, could adopt. The Holts subsequently founded Holt International Children's Services. Now, almost 30 years later, this Eugene-based organization provides adoption and child welfare services not only in Korea but in the Philippines, Thailand, India and Nicaragua.

Harry died suddenly in 1964 in Korea on one of his many trips to pick up children. His wife, now 77, continues to be active in their organization's work.

Many PVOs rely heavily on volunteer support, charitable contributions, foundation grants and, in many cases, support from AID. The groups vary in size, purpose and background. A few have staffs of one or two. Others have several hundred. PVOs have representatives working in almost every corner of the world, including areas where there is no U.S. bilateral foreign assistance program.

Some PVOs focus their efforts on specific geographical areas: Partners of the Americas, the Asia Foundation and Foundation for the Peoples of the South Pacific. Others, such as Save the Children, Foster Parents Plan and the Christian Children's Fund, specialize in medical aid or provide child welfare services.

PVOs cover the gamut of services providing assistance in community development, literacy, vocational training, agriculture, family planning, refugee needs, renewable energy development, cooperative institution building and emergency disaster relief. There are well over 500 such groups in the United States.

In 1946, PVOs were required to register and the relation between the private sector assistance programs and those of the federal government took on a new look. Private groups often join forces with the government in a common development effort. For example, PVOs help distribute food and emergency relief supplies provided by the U.S. government.

Many work closely with AID to administer federal economic assistance programs. As part of its program, AID channels funds to many private groups to assist in their development projects. Funds made available by AID to private organizations in the last eight years have increased more than fivefold from $39.4 million in 1973.

PVOs and the people who work in them are reminders that the development process is above all, a human one. It is the efforts of individuals that in the years ahead will add up to make the big difference for the entire world. □

Raisa Scriabine, formerly with AID's Office of Public Affairs contributed to this article.

Volunteer Business Boosters

A close-up look at the Institute for International Development

An Interview with Al Whittaker

The Institute for International Development, a private voluntary organization based in Vienna, VA, uses the resources of the U.S. private business sector to support small business start-ups in developing countries. The Institute has primarily helped start poultry, honey, cattle, soybean, maize and fruit enterprises in four countries—Honduras, Colombia, Indonesia and Kenya. Following is an interview with the Institute's chairman, Al Whittaker.

Q. What was the idea behind the Institute for International Development?

A. The idea started with an ex-missionary, Paris Reidhead, a man who had spent about four to six years in the Sudan in the early 40s. He became very concerned about the poverty and conditions under which people were living. As the time went on, this seemed to grow on him rather than diminish. He returned to this country and after a number of years he became pastor of a church in New York City, at the west end of 44th St. Quite often on his lunch hour he would walk to the other end of 44th St. which is, of course, where the United Nations is located. There he was impressed with the great number of feasibility studies that lined the shelves and with the fact that very little actual work was translated from these feasibility studies into actual productive efforts in relieving poverty in the Third World. With personal funding from friends he traveled extensively, talking to people in the developing countries. In this connection, he discovered that unemployment was alarmingly high and that income-producing opportunities had to be created if living conditions were to improve. Accordingly, he developed the idea of utilizing the business community in our own country to provide resources—technical assistance, financing, and training—to start small business enterprises in the developing countries. Now, he was a minister with little or no business experience. So, several of us, unknown to each other, but with whom he had shared his idea, left what we were doing and came to Washington to form what is now know as the Institute for International Development, Inc. (IIDI). My first exposure to poverty in the developing world was in connection with my work for the Bristol-Myers Co., where I was the president of what was known as the Bristol-Myers International Corp., the overseas arm of the company. Of course, I traveled a great deal and had been exposed to much of what Mr. Reidhead had seen and it had made a tremendous impression on me. I was moved to do something, but I had no way to respond to what I was seeing and hearing, which left me rather frustrated. So when this gentleman shared his idea with me, I couldn't help feeling that this was to be my response. That was why I responded so readily, left what I was doing—which at that time was managing a company in New Jersey called the Mennen Co.—they make health and beauty aid products—and came to Washington. (Whittaker was executive vice president of the Mennen Co.)

Q. What does IIDI do?
A. IIDI's single-minded focus—job-creation—is designed to increase the incomes of the poor through employment in new or expanded entrepreneurial enterprises. We have to be very aware of the level at which these countries are operating in terms of their economic development. And to do that you, in effect, have to turn our clock back 150 or 200 years, to when there was no General Motors, Exxon or IBM. This was a country of small businesses, and that, in a relative sense, is the situation today in the Third World. True, multinationals have been operating in these countries, have brought their technology and skills and have replicated small versions of U.S. companies.

While they have provided jobs for many host country people, this type of economic activity represents development "from the top down." This needs to balanced by activity that starts at the grass roots and helps people develop their potential, to train them so that they're developing certain skills, and then provide them with the necessary resources. We saw our role in that context.

> "You have to start at the grassroots and help people develop their potential."

Q. How did you get IIDI "off the ground"?
A. We started with a small staff—a nucleus of people who were committed to the purpose and who represented various and diverse backgrounds . . . businessman, missionary, agriculturalist, nutritionist, and the like. We knew what we wanted to do and we clearly saw the need. But none of us could claim to be a professional developmentalist (if there is such a thing!) We were, in effect, "plowing new ground."

We had no prototype, no pattern to follow. So in the early years we learned by trial and error. Then we reached a point where we began to get a few handles on technique and methodology and our impact began to accelerate. Consequently, we now are working with a viable concept with impressive results.

Q. Could you give us an example of what you consider to be one of your effective programs?
A. Lets take Honduras where IIDI has been operating for about six years and has enabled over 60 business enterprises to begin or expand, representing hundreds of jobs for the unemployed or underemployed. The businesses have been both agricultural and food-related as well as manufacturing and service enterprises in urban areas.

Initially, our field director, an expatriate, handled most of the work but as the activity increased, Hondurans were added to the staff and trained. Our objective was to ultimately have a completely indigenous operations which would be completely autonomous and self-supporting. I am happy to report that this has become a reality in Honduras during the past few months. The staff is completely made up of Hondurans. At this point the operation is completely on its own.

Q. How about the other countries where IIDI has a presence?
A. Our objective is exactly the same in Colombia, Kenya and Indonesia. While these countries have not yet reached the level of maturity in Honduras we expect that each of the operations in these countries will be autonomous and self-supporting within the next year. At this point IIDI has been involved in starting or expanding over 700 businesses in these four countries.

Q. How do you enable people to go about creating jobs?
A. The IIDI field director provides the leadership and training. It doesn't take long for the word to get out that we're there to help people start businesses. What we're doing is helping people

to develop and to implement their own ideas. For example, a man wants to start a shoemaking business. Now, maybe he has a skill. He might have served as an apprentice or worked for another shoemaker and now he wants to be on his own. He has the initiative and motivation to do it but he doesn't know how to go about it. He doesn't have credit. He probably doesn't even know what the inside of a bank looks like, and if he did, he couldn't begin to qualify for a loan. At this point, we do as thorough a check as possible, talking to his neighbors, friends, people he has worked for, members of his church. If the results are positive, we raise questions that he probably hasn't thought of up to this time. We have to confront him with some of the realities that he will face.

Maybe he can write, maybe he can't, but if he can, we involve him in the process of making a business plan in the very simplest forms. We ask: How many pairs of shoes can he make? What is his income going to be; how many people is he going to employ; where is he going to get leather and how much does he have to pay for it? How is he going to sell the shoes? Is he going to buy a stall in the marketplace or sell house-to-house? Who is going to do that—his wife? Anybody else in the family? What kind of equipment does he need? We try to envision all the things he needs to think about before he can actually begin. Then that's all written down and it becomes a simple plan to follow. It includes financial projections—what his income will be, what itemized expenses will be, and how much profit he will make. Then a simple cash flow statement is prepared which helps to determine the amount of the loan required and the time period to pay it back.

IIDI has a revolving fund out of which we make loans and for which we charge interest, somewhat below the prevailing rate in the country. If he requests a loan of $2,000, he has to carefully document what he is going to do with that $2,000. These proposals are reviewed by our U.S. office in Vienna, VA, and if approved, the money is made available through the local office. Care is exercised in the way in which the funds are disbursed to insure that it is actually used for the intended purpose. The enterprise is then begun and IIDI continues to be involved by monitoring the project regularly (ideally over a month). This provides an input of technical assistance, at regular intervals which helps insure success.

"We
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Q. What are your plans for the future?

A. Having developed an effective way of carrying out our basic concept, IIDI has changed from an organization directly focused on Third World small businesses and job creation to one concerned with developing host country agencies whose purpose is to generate employment opportunities among the poor through entrepreneurial business development. In other words, IIDI has changed its thrust from a U.S.-based organization with operating control over its host country affiliates to one now involved in the institution-building process of enabling locally staffed and directed entities reach the point of self-sufficiency and autonomy.

We're committed to getting these people to the point where they can contribute to and control their own destiny. There are too many efforts in the name of foreign assistance that have failed in this respect—instead they have created a dependence on America or other developed countries which goes on interminably. The IIDI concept represents a vital and unique contribution to the countries because it works; it is cost-effective; it is people-enabling; it meets the felt needs of the people; it is self-multiplying; and it effectively incorporates the spirit of development—helping people to be self-sufficient. □

This interview was conducted by Raisa Scriabine, formerly of AID's Office of Public Affairs.

Co-op society now: Battle against human poverty read a faded sign we passed on the Masaka road in southern Uganda. The 60s ring of the slogan does not detract from the validity of its basic message—cooperatives and their members are the fodder of Uganda's redevelopment efforts and ultimate revival.

In an innovative approach to at least starting to solve the country's food, employment and industrial development problems, AID, since 1979, has funded a project that provides hoes and other farm tools for the 12 million farmers. The project had led to a partnership between AID, the Uganda Ministry of Cooperatives and Marketing and two private Ugandan firms—Uganda Hoes and UGMA Steel and Engineering Corp.

About 90% of the more than 14 million people in Uganda depend on agriculture for their livelihood. Agriculture—particularly the production of coffee and cotton—constitutes four-fifths of the value of Ugandan exports. During the decade of strife under Idi Amin and the subsequent war of liberation, agricultural production and the tools needed for that production drastically declined.

In a land of traditional farmers, the hoe is the key to life. Without the hoe, the individual and the national economy alike suffer. For example, during Amin's reign, many farmers grew only what they needed to live on. But to produce exports needed for foreign exchange, as many as 6 million hoes are needed, with the demand expected to continue, since the

HOES

Uganda needs 6 million; the need spawns an industry.

by Fred Perry

tools must be replaced every two to three years.

A dent has been made in the 6 million figure, thanks to AID's Commodity Import Program. Two years ago, a $3 million AID grant to Uganda resulted in the delivery of more than 2 tons of steel, which made 300,000 hoes.

But the benefits go far beyond the farmers and their families. At UGMA Steel in Lugazi, the AID grant helped revitalize the once-thriving 25,000-acre complex. Twenty years ago, UGMA was a prosperous enterprise employing several thousand people. It languished in the 70s. Today, it employs 350 Ugandans who manufacture desperately needed hoes, shovels and axes. A $5 million grant matched by a $1.8 million contribution from the Uganda government will boost production.

Thirty miles away, Uganda Hoes employs more than 200 people. Manager John Waibale earned a master's degree in agronomy at the University of West Virginia under AID sponsorship. His company will continue its production with funding from the European Economic Community while AID support will go to UGMA, which has set a production goal of 515,000 hoes.

In addition to providing the tools to boost food production, the project also aims to use the 50-year-old co-op societies to distribute hoes, seeds, gunny sacks, bicycles and spare parts; to provide a modest training program in the cooperative sector; and to establish a technical assistance program to strengthen the co-op movement, particularly its distribution functions.

The early success of the project reinforces the optimism reflected in Uganda's busy market places, rebuilding schemes and reopening of small businesses, especially in the southern part of the country. The fact that the Ministry of Cooperatives and Marketing has been able to distribute farm tools, that UGMA can provide employment to Ugandans and survive as a private enterprise despite recent devastating conditions is a hopeful sign of recovery for Winston Churchill's "Pearl of Africa." □

Fred Perry is with AID's Africa Bureau.

5 DE JUNIO

Día Mundial del Medio Ambiente

La planificación deficiente de nuestras ciudades,
con la consecuente contaminación del agua, del aire y
la destrucción de nuestros recursos naturales,
deterioran el ambiente,
afectando el desarrollo normal de nuestra vida.

ASOCIACION COSTARRICENSE
PARA LA CONSERVACION DE LA NATURALEZA
Teléfono 23-27-49 Apartado 8-3790 San José, Costa Rica

ASCONA

ASCONA prints posters, cards, newsletters and more as part of its public awareness effort. Right: AID project manager Steve Haynes, left, confers with ASCONA Executive Director Jorge Astacio.

FRIENDS OF THE FOREST

Speaking out against deforestation in Costa Rica led to a new environmental group.

by Steve Haynes

Costa Rica today is beset by economic woes. But even as the value of its currency erodes, the Central American nation faces another kind of deterioration potentially just as dangerous—erosion of its natural resource base.

Overgrazing and a lack of land management are taking a whopping bite out of Costa Rica's good growing land. Since 1970 nearly 60,000 hectares—about 150,000 acres—have been stripped of trees every year. Deforestation has caused not only soil erosion, but also loss of valuable watersheds and a drop in agricultural production, something a country struggling to make ends meet can ill afford. Major exports are coffee, bananas and meat.

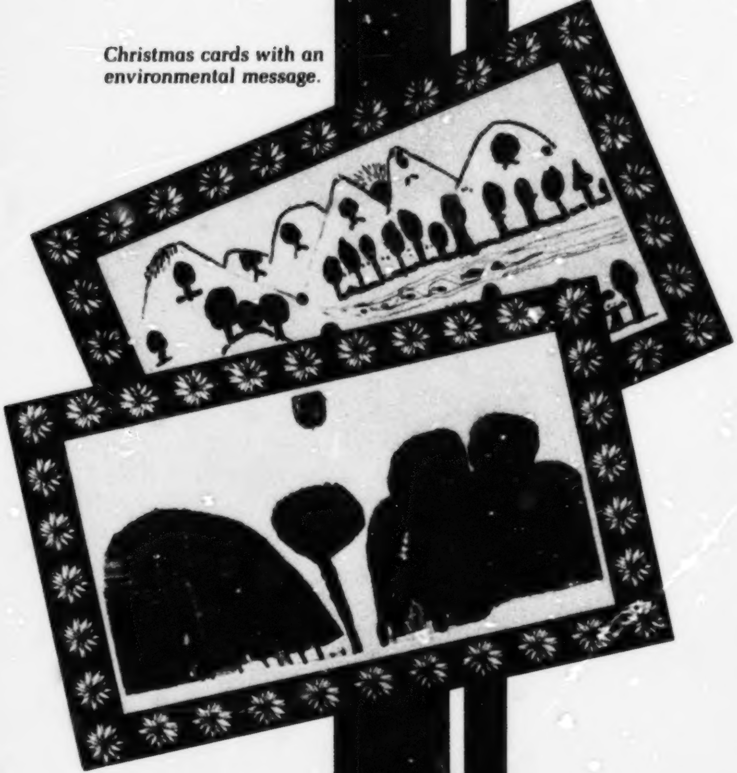
Since the early 70s a group of private citizens in Costa Rica has been working to reverse the trend. Their slogan, "Development Without Destruction," is a tall order, but one they're determined to fill through a campaign of public education, research and investigation into illegal acts.

The group, Associacion Costarricense para la Conservacion de la Naturaleza (ASCONA), was pulled together in 1972 by two men, Leslie Holdridge and Joseph Tosi, both ecologists. Their new organization, made up of a handful of concerned professionals in biology and related sciences, became the first public interest group in the country to speak out against the accelerating environmental deterioration.

At first it seemed no one was listening. There was no money. It took five years before the lawyer retained to draw up the necessary legal papers actually got around to it. And in the meantime, the San Jose-based group gained the unhelpful reputation as a "protest" outfit. Small donations from two U.S.-based private environmental groups—the World Wildlife Fund and the New York Zoological Society—kept ASCONA breathing.

Six years after its birth, ASCONA's president, Murray Silberman, former AID chief of housing for Latin America, guided his organization to certification and registration as a private voluntary organization, paving the way for a two-year grant from AID in 1978 for a wide range of environmental activities.

Even at this point ASCONA could count 27 dues-paying members. But its new staff, hired with AID support, embarked on a membership drive. One of the first steps was to lower the yearly dues from $27 to $7. It worked;



Christmas cards with an environmental message.

Protejamos el medio ambiente

ASCONA

950 new members soon joined. They included influential people in government, education and industry as well as private citizens. In addition, ASCONA formed youth affiliates to allow elementary and high school students to join at a reduced rate. The uphill battle finally began to level off.

To make people in Costa Rica aware of their stake in a healthy, productive land, ASCONA publishes a bimonthly bulletin now as well as various pamphlets and translations of articles published outside the country. Christmas cards with an environmental message are printed and sold. ASCONA also runs seminars throughout the country on such topics as deforestation, conservation, pesticides, even remote sensing. To supplement these, it offers field trips to national parks and other areas of interest.

The media have been supportive. ASCONA averages 10-12 radio interviews a month and a spokesperson has made weekly appearances on a local family television show.

A library is on its way to becoming one of the most comprehensive of its kind in the country, and students make frequent use of its collection of slides, maps, books and articles.

BEST DOCUMENT AVAILABLE

Testing river water near San Jose.

Trash cans.

Children are important to this effort. ASCONA runs programs especially geared to capture their interest. A recent national painting contest with an environmental theme attracted over 200 entrants. And in Puriscal, an area with particularly serious deforestation, a six-month awareness program was started in two schools among fifth and sixth graders. Students learn how to start fruit trees from seeds and cuttings. Then each student is required to plant at least one fruit tree at his or her home—or at a neighbor's. They have begun to grow trees all around the school, too. Rounding out the program, ASCONA takes the kids on field trips to a zoo and a nearby forest.

No less important than education to ASCONA's three-pronged attack are research and investigation. The idea is to provide technical assistance and to pinpoint problems that need to be brought to the attention of authorities. For example, an ASCONA technician uncovered irregularities in a permit issued for tree-cutting in a 100-acre protected area. The technician escorted a Costa Rican forest service official to the site tc witness the illegal axing. Subsequently, the forest service revoked the permit, thus saving one of the few forests left to protect an important watershed. Water-

ASCONA's Owen Ramirez helps a school child plant a tree.

sheds are the birthplace of most important sources of water.

ASCONA's commitment to evidence-before-accusation has gained it the respect of both government and the private sector—and has virtually dispelled the "against everything" image it labored under a few years ago. Consequently, ASCONA has received a growing number of requests for research into environmental issues and problems from private groups and from municipalities and government ministries. These requests have ranged from studies on destruction of mangrove swamps to park development and protection, pollution and solid waste disposal.

ASCONA's three-year, $480,000 AID grant awarded in 1980, has enabled it to set up affiliates in key areas of the country. To be an affiliate a group must have at least 20 active members. Two cities, Puriscal and Ciudad Quesada, established affiliates before 1980; since then, four new ones have been inaugurated in San Mateo, Guapiles, Quepos and Naranjo. Five Peace Corps volunteers are now working in the central office and in Ciudad Quesada, San Mateo, Quepos and Guapiles.

ASCONA so far has depended on outside funding both by the Costa Rican government and AID. In order to grow independent, it has stepped up fund-raising, not an easy task in a developing country with serious economic problems. Despite those problems, donations have increased from $6,440 in 1978 to $37,715 in 1980.

An outside consultant hired by AID to evaluate the first years of ASCONA's AID-funded activities, who has worked with over 50 AID projects in 12 Latin American countries, called ASCONA one of the three most effective organizations he has encountered.

ASCONA has come a long way from the days when it couldn't pay the rent or meet its tiny payroll. Now it's respectable, and its efforts may well provide a model for other private conservation efforts in Latin America. ☐

Steve Haynes is a forester with AID's Mission in Costa Rica.

WHAT THE MEDIA SAY...

The Senate added two useful riders when it approved the Administration's $6.7 billion foreign aid package. As requested by President Reagan, it removed longstanding restrictions on aid to Chile and Pakistan. But without asking, the President also got what he needs: an amber warning that Congress will not forget Chile's human rights abuses or Pakistan's nuclear ambitions. . . .

—New York Times

There may be, after the Cancun summit meeting, some greater hope for Ronald Reagan's relations with the Third World. Or with some parts of the Third World. And about some aspects of the relationship, not all. . . .

Too often discussion . . . assumes a simple confrontation of rich and poor, which disregards many lines of separation.

In reality economics slops into politics and vice versa. The so-called Group of 77, which actually is a loose collection of 120-odd developing countries, embraces enormous diversity; politically, socially economically.

—Henry Trewhitt
Baltimore Sun

Five months after Costa Rica negotiated a three-year, $330-million bail out from the International Monetary Fund, its economy has slid to the point where international commercial banks have suspended all lending and the government has ceased paying all but partial interest on its $2.7 billion debt.

—Washington Post

World Bank President A. W. Clausen is mounting a major campaign to get more money for energy-related loans to poor countries in the wake of U.S. opposition to a proposed energy-lending agency.

Mr. Clausen is visiting Saudi Arabia this week to seek Arab contributions to finance an "interim" expansion in the bank's existing energy lending program. And he has begun exploring options to a separate facility with leaders of other nations.

—Wall Street Journal

Legislators from 19 Asian countries have concluded a United Nations sponsored conference on population problems by proposing that their governments work to hold Asia's annual population growth rate to 1% by the end of the century.

They also asked governments everywhere to increase contributions to international activities for population assistance to a record $1 billion a year by 1984.

These goals are voluntary and the conference did not adopt specific measures for carrying them out.

—New York Times

By breaking relations with Cuba, Jamaican Prime Minister Edward Seaga has moved a step closer to the United States—and the Reagan Administration is smiling approval.

In the process, the Harvard-educated Mr. Seaga has firmed his role as the key figure among Caribbean leaders opposed to Cuba.

Washington sees Jamaica emerging as the linchpin in its strategy to combat Marxism in the Caribbean and to spark economic growth in the region.

—James Nelson Goodsel
Christian Science Monitor

One of the toughest jobs in the Reagan Administration has been handed to the biggest man among top U.S. officials—6-foot, 8-inch Thomas Ostrom Enders, Assistant Secretary of State for Inter-American Affairs.

His assignment: Come up with some plan to improve our relations and our image in Latin America, a region of great importance to the United States. He started off well after getting past a few pesky members of Congress who doubted if he was conservative enough.

But he wasn't long in finding out he has a real hard job. His roughest experience is that astonishing Mexico-France agreement just announced. It gives formal recognition to the Marxist-led guerilla forces in (El) Salvador, a little country in Central America in the throes of bloody internal strife.

—Ben F. Meyer
Daily Gleaner
Kingston, Jamaica